carolina planning

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editor's note

The issues dealt with by the planning profession and the functions required of planners continue to grow. A planner today must be able to wear many different hats to continue to function effectively. Land use planning, environmentalism, community and economic development, housing and real estate development, transportation, infrastructure and developing nations planning are just some of the fields of opportunity available to the planner. This is the attraction, the draw, of the planning profession.

This issue of *carolina planning* contains a variety of articles addressing current planning issues. In a candid interview, Norman Krumholz, current president of the APA, shares his thoughts about the focus and direction of the planning profession. Krumholz also contributed an article discussing his experiences as a planning professional and academic and the role of community development corporations.

Gail Fischman's article on visual impact assessment techniques is the first of two pieces examining the concept of aesthetic zoning. Fischman reviews the latest methods of visual impact assessment and provides useful critiques outlining each approach's strong and weak points. Using the North Carolina coastal area as his example, David Blatt presents a legal and theoretical justification of the aesthetic zoning concept.

A case example of a successful land use planning approach is provided by the Alford, Downes and Woodworth piece on Bath, North Carolina's strategy. Edward J. Kaiser, Professor of Planning at UNC-Chapel Hill, provides a commentary on another important environmental and land use planning concern—the protection of watershed areas. In the commentary, he lays out some basic principles needed to provide an effective watershed-wide land use management system.

The staff of *carolina planning* would like to extend its thanks to the North Carolina Chapter of the APA, contributors to the John Parker Trust Fund, advertisers and our regular subscribers for their continued support. Special appreciation is also expressed to the past editors of *carolina planning* who shared their useful ideas with us at the UNC-DCRP fortieth reunion.

John D. DiTullio
Editor

carolina planning welcomes comments and suggestions on the articles published and will be happy to accept new material for future editions from interested persons. Such material should be submitted to the Editor typewritten and double spaced.

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In the Works

Report on the Mid-Atlantic States APA Conference

Darlene Finch Jon Lockman

The mid-Atlantic chapters of the American Planning Association held a major conference in Virginia Beach, Virginia from September 24 through 26. The conference was organized by the Maryland, District of Columbia, Virginia and North Carolina chapters of the APA. A wide varety of issues were discussed during the conference, ranging from managing the small planning office to the development and implementation of impact fees.

Thursday morning, September 24, began with a session entitled "Land Trusts: A Non-zoning Vehicle for Resource Protection and Land Use Implementation." This workshop outlined what land trusts can do to further planning objectives, and when their use should be considered by local planners. Robert Beckett, Executive Director of the Maryland Environmental Trust (MET), began the session with a film which examined the use of conservation easements as a way of preserving unique environmental areas. The film presented several case studies where conservation easements have been successfully used to preserve private lands. Beckett then described the MET and its efforts to conserve, stimulate, improve and perpetuate Maryland's natural environment. With state funding, the MET's programs arrange for the donation of land, conservation easements and financial contributions in order to protect deserving open space properties. Beckett believes that conservation easements, although a focused tool with very limited applications, have been used effectively in Maryland. Given a $300,000 budget by the state, the MET has succeeded in preserving open space areas worth $2.5 million. Beckett noted that one of the prime motivations towards voluntary donation of conservation easements has been the role of property taxes and tax credits.

The second speaker at the session was David Miller of Natural Lands Trust, Inc. Miller described his organization as a private, non-profit group which operates in the region around Philadelphia to improve conservation management. Natural Lands Trust focuses on land which surrounds areas that are rare and unique, and attempts to influence how these areas are managed. Trust's goal is to protect natural areas for the general public without actually owning these lands. By working with landowners, the staff of NLT works to satisfy both conservation and profit motives in a manner which allows for effective conservation management. In describing how the staff accomplishes this, Miller presented a detailed case study of a property located south of Philadelphia where NLT designed a program which allowed the landowner to realize a profit while maintaining effective and sensitive environmental management.

There were four mid-morning sessions: "Managing the Small Planning Office"; "Community Character: What Is It?"; "Planning for Black Neighborhoods in Downtown Revitalization"; and "Private Sector Provision of Road Improvements." The last session discussed the trend toward private participation in infrastructure development and differences in the form of participation as dictated by state enabling legislation. Members of the panel included Robert A. Longfield, an associate of Harland Bartholomew & Associates; Robert L. Moore, Chief of Transportation Planning for Fairfax County, Virginia; and George B. Chapman, Planning Director of Raleigh, North Carolina. Moore began the discussion by describing the proffer system currently in use in Fairfax County. He specifically addressed the major features of the proffer system as well as the statutory limitations of the technique. He as-

Darlene Finch and Jon Lockman are Master's candidates in the Department of City and Regional Planning, majoring in Land Use and Environmental Planning.

sessed the strengths of the proffer system as being: providing site-related improvements; having widespread application; being legally binding; and eliminating the uncertainty of zoning. Moore also described weaknesses of the system, including the voluntary nature of the proffer (meaning all-or-nothing acceptance), limited off-site applications and the fact that commitments are not always proportional to changes in intensity.

George Chapman spoke next and explained Raleigh's current development pressures as well as the historical approach to infrastructure development in North Carolina. He said that a combination of resource limitations and rapid growth had led the city to move from requiring exactions from developers to extractions to extortions. In order to improve upon this system, Raleigh developed and implemented an impact fee/facility fee system. Based on the belief that exactions do little to expand existing systems and are fairly inequitable, the City of Raleigh created a system where fees were assessed based on the actual impacts created by new development rather than on specific locational requirements. The City of Raleigh asked for and received from the North Carolina legislature specific approval to develop a fee system. Chapman explained the kinds of questions that have been raised and addressed in developing Raleigh's system and concluded by suggesting issues other municipalities should consider before deciding to use impact fees.

The final speaker was Robert Longfield who discussed Florida's experience with impact fees. He explained the specifics of a road impact fee system used by Manatee County, and highlighted both the development of the system as well as how some of the more difficult issues were resolved. The system that has been used in Manatee County for the past four years draws heavily on legal holdings from other county cases and relies on a legal nexus test whereby new development must receive equal or greater benefits than existing development. Longfield described the formula used to calculate road impact fees in the county and suggested a variety of other services that can be financed by fees. These include solid waste, emergency medical services, parks and transportation. He stressed that impact fees cannot be used for maintenance and that all current deficiencies are the responsibility of existing residents, not the new development.

Lane Kendig's presentation on community character centered on a curious irony. The purpose of most planning enabling legislation is to "preserve community character." Planners, however, have never tried to define just what community character is. Citizens who object to new development projects often bemoan the loss of character in their neighborhoods, but what is it exactly that makes a place feel urban, suburban or rural?

Kendig criticized the unfortunate use of density as the sole criterion for judging community character. Using photographs of developments at various densities, Kendig proved to the audience that the number of dwelling units per acre is only a minor element in perceiving a project. Kendig's concept of character is based on the relative quantity of architectural space, borrowed space and landscape available to the viewer. Architectural space is the enclosure within a built environment. Landscape is a view of natural terrain largely unworked by man. "Borrowed space" is a term Kendig uses to describe what makes suburban areas different from urban areas dominated by architectural space, and rural areas dominated by landscape. In suburban areas, extensive landscaping and open spaces create "micro-landscapes" which can be seen by suburban residents. They are "borrowed" because the viewer does not own or control them. The progressive loss of borrowed space degrades the character of a suburban community and changes it into an urban one. Kendig's consulting firm has developed a way to quantify borrowed space to help communities set measurable objectives for the purpose of character preservation.

Thursday afternoon continued with five new sessions entitled: "Managing Land Use at the Shore Edge: Maryland's Chesapeake Bay Critical Areas Program"; "Threatened Planners – Strategies for Survival"; "Federal Installation Planning as Part of the Development Process"; "Where the Navy is Today"; and "A Public-Private Partnership."

"Managing Land" provided an overview of Maryland's recent law and a thorough introduction to the innovative and controversial land use regulations recently adopted by the state. In order to manage land use and development to protect water quality and sensitive habitat resources, the state adopted Critical Area Criteria to regulate new development on lands immediately adjacent to the Chesapeake Bay. The session's speakers addressed such topics as the legislative history and administrative aspects of the Criteria, specific statutory components of the legislation, and potential challenges.

Dr. Sarah Taylor, Executive Director of the Critical Area Commission, outlined the events that led up to the development and adoption of the Critical Area Criteria. In 1984, the Environmental Protection Agency completed a study which concluded that the Chesapeake Bay was experiencing severe environmental decline and that immediate steps were necessary to mitigate the impacts of human activity upon the Bay. In response, the state of Maryland passed 34 separate initiatives addressing the environmental problems. The initiative which established the Critical Area Program declared all lands from the high tide line to 1,000 feet inland as the critical area and established the Chesapeake Bay Critical Area Commission to develop regulations to guide future development. The Commission began work in October of 1984 and was given until December of 1985 to develop criteria to be considered by the state legislature. The overriding goal was to accommodate future growth in a way that minimized impacts to water quality and the environment. Members of the Commission felt that these goals would be best achieved by examining and classifying existing growth, allocating future growth and trying to distribute new growth away from the critical area.

Dr. Kevin Sullivan, scientific advisor to the Critical Area Commission, prefaced his remarks by stating that the concepts in the Criteria reflect components of other programs from around the country. He described previous attempts to protect the Chesapeake through the use of engineering solutions and performance standards as insufficient. The Critical Area Criteria were developed to coordinate and refocus existing efforts to accomodate future growth while protecting the water quality of the Bay. Sullivan explained the structure and content of the Criteria. The Criteria begins by designing and establishing a classification scheme for existing land use which becomes the basis for allocating future growth. The three classes used are: Intensely Developed Areas; Limited Development Areas; and Resource Conservation Areas. The Criteria lists specific goals and standards for all future development in these areas. The second part of the Criteria explains the components of the critical area protection programs required of local jurisdictions, as well as variance and grandfathering provisions. The final section of the Criteria addresses resource management and protection issues including: shore erosion, forests and woodland protection, agriculture, surface mining, natural parks, and habitat protection. Implementation of the Critical Area Criteria depends heavily upon the existence of a substantial information base, much of which was created as the result of strong support by the federal government. Sullivan emphasized the importance of the role of state agencies for insuring the success of the Critical Area Program.

Lee Epstein, the attorney for the Commission, described the variance provision in the Criteria and addressed concerns over the taking issue. This question arose through the Resource Conservation Areas classification which restricts development intensity to one dwelling unit per 20 acres. Epstein believes that the courts will uphold any downzoning actions resulting from this classification as not involving a taking. He also described the enforcement mechanisms available to the Commission and noted that there are no citizen suit provisions in the Criteria.

The last session on Thursday afternoon was entitled "Lobbying Roundtable: Effective Grassroots Efforts." This was a "how-to" session which stressed methods that planners could use to effect state and national legislation important to planning. Joseph T. Fitzpatrick, City Treasurer for Norfolk, Virginia and a former member of the Virginia legislature discussed lobbying techniques that were particularly effective in influencing legislators and suggested strategies for providing information and advancing legislation. George Marcou, Deputy Executive Director of the APA, and Nancy Schamberg Willis, Director of Government Affairs for APA, provided additional suggestions for effective lobbying techniques. Willis provided a list of tips for communicating with lawmakers which recommended getting to know the lawmaker's staff person, making sure that information is current, keeping letters brief, and using local examples to substantiate one's position. The APA staff also mentioned that the APA office in Washington, D.C. has materials available on lobbying at the chapter level.

The five Friday sessions were: "Innovative Transit Options"; "Hiring and Using Consultants"; "Planning Commssioners' Workshop"; "Development Fees: The National Perspective"; and "Housing the Homeless: Planning Issues for the International Year of the Homeless, 1987."

The first session presented a national perspective on impact fees and discussed the legal and theoretical aspects of preparing a defensible and logical fee system. Dr. Thomas Snyder of the University of North Carolina at Chapel Hill Department of City and Regional Planning discussed the issues of in-

Providing Infrastructure—Who Will Pay?

tergenerational equity and economic efficiency of impact fees. Traditionally, each generation of citizens has paid for its own infrastructure needs and, in part,has funded some of the next generation's needs. This has worked reasonably well in communities that have grown at a moderate pace. However, impact fees may be required when the existing infrastructure cannot accommodate rapid growth. The necessary urban infrastructure cannot be provided by the combination of current revenues and contributions from the previous generation. When designing an impact fee system a fair distribution must be maintained between costs charged to new residents and those paid by existing residents. Snyder believes that impact fees have a rightful place in the arsenal of planning tools, but warned of the potential for misuse. Besides the intergenerational equity problems, economic analysis suggests that impact fees may lead to higher rents, slower economic development, and may indeed be a very poor growth control measure. James Duncan, the Director of Land Development Services for the City of Austin, Texas, followed Snyder with a step-by-step discussion of how to design a legally defensible impact fee system, and worked through the many definitional distinctions necessary to understand the vocabulary of the field.

The second session focused on specific examples of existing workable development fee systems and featured detailed explanations of the programs in Montgomery County, Maryland and Raleigh, North Carolina. Richard Tustian, Planning Director of the Maryland-National Capital Park and Planning Commission, described the preparation and implementation of the Montgomery County impact fee system. Ira J. Botvinick, Deputy City Attorney for Raleigh, presented that city's plan for impact fees and warned the audience not to jump on the impact fee bandwagon too hastily. Botvinick's detailed outline of the possible legal pitfalls of development fees suggested that an increase in property taxes might be an easier way to raise money. William Breazeale, Assistant Planning Director for Raleigh, continued the discussion with details of the data colletion and modeling that were employed during preparation of the city's fee system.

"Housing the Homeless" was moderated by APA President Norman Krumholz. The Reverend John F. Steinbruck, Pastor of Luther Place Memorial Church and Director of the Luther Place Women's Shelter in Washington, D.C., described the homeless problem in Washington, and his experiences running a shelter. He lamented the lack of sufficient political will in this country to address the needs of the homeless and noted that the problem was compounded by the absence of advocates for this segment of society. Steinbruck was extremely critical of the policies of the Reagan administration and the policies of the District of Columbia addressing the homeless problem. He explained that despite large increases in private and volunteer efforts, these alone cannot solve the problem. The government must become more involved in finding solutions to the homeless problem.

Arthur L. Sargent, Director of Community Planning for the Health and Welfare Council of Baltimore, Maryland was the principal investigator on a recently completed study entitled "Homeless in the State of Maryland: A Study of People at Society's Economic Margin, and Their Service Needs." He prefaced his remarks by reminding the audience that to be homeless means being totally vulnerable and that the problems of the homeless are extremely complex. Many of the people on the streets are there because they have fallen through the cracks of every program designed to help them. In looking at homeless individuals in Maryland, Sargent's report found the most pressing service needs to be: emergency services, transitional housing, affordable housing, specialized housing, and housing that is linked to job training and health services. The report also found numerous barriers to providing for these needs, including uncoordinated funding, lack of sufficient motivation to help the homeless, the complexity of the problem, and the diversity of the homeless population. Sargent concluded that there is a short-term emergency need for "urgent charity," a long-term need for "rigorous justice," and an overall consistent approach to the problem of homelessness. □

40th Reunion of the Department of City and Regional Planning at UNC

Carolina Planning Staff

The Department of City and Regional Planning at the University of North Carolina celebrated its fortieth anniversary with a three day reunion beginning on September 26. Seminars involving alumni as panelists were held to discuss state-of-the-art planning approaches and the role of the Department's current planning curriculum. Discussion topics included land use and environmental planning, economic and community development, state and federal planning, and planning in developing areas.

Francis Parker discussed the genesis in 1946 of the UNC planning program. At that time, Harvard and MIT's planning schools emphasized physical planning programs. Parker felt the establishment of the DCRP reflected a creative tension among four sets of issues: physical versus social planning; city versus regional planning; a design versus a policy orientation; and area specialization versus a more generalist approach. Parker discussed how these tensions were worked out in the early days of the DCRP. First

Reunion group photo.

Professor Edward Kaiser served as moderator of the panel discussions which took place during the welcoming session. This session, entitled "The First 40 Years—The Department's Contribution to Planning", provided an overview of the department's history. The panelists represented graduating classes from 1951 to 1978. They reminisced about their personal experiences, and provided insights into the political, social and economic climates which contributed to the trends in planning thought and practice during their respective eras.

there was the question of how a planning department should be organized—as a separate entity, or as part of a more traditional program (such as architecture, design or public administration). The faculty decided to establish a separate department. The nature of the program, and of the courses to be offered, was the next decision hurdle. Some early faculty members insisted on the importance of including the regional aspects of planning in the curriculum. Hence, "regional" was retained in the department's title. In resolving the "creative tension,"

Then...

then, the new department decided on a physical-city-policy-area specialization orientation. Parker went on to note the influential role played by the Tenessee Valley Authority (TVA) in the formation of the UNC program. The Authority provided enormous assistance in terms of funding, faculty support, and serving as a valuable technical resource. Indeed, the program's original three faculty members came to UNC via the TVA.

Harold Glover described his class of 1972 as the first class with a proportionately large number of minorities. Out of 45 students, 16 were minorities. Disillusionment with urban renewal efforts—dubbed "urban removal"—contributed to the increasing involvement on the part of minorities in planning. They felt a need to become active participants. They pressured the faculty to "restructure and sensitize" the courses. The department shifted its focus to regional planning, in part because the enthusiasm over the new town movement of the 1960s was still strong. But many minorities rejected social planning courses. They were bent on harder disciplines such as land use and transportation planning. They wanted to be effective planners, and that meant influencing politicians, and "effecting knowledge and understanding towards the complex problem of urbanization." They planned to dedicate themselves to working in southern communities (which, Glover explained, came later to mean anywhere south of Canada). They saw themselves as pioneers whose duty it was to encourage other minorities to join UNC's planning program.

Cathy Meyerson Kleiman described her experience at Chapel Hill as a member of the class of 1978. According to Kleiman,it was a time to reevaluate the social, physical and economic aspects of planning. It was "a time of shifts." People were moving back into the cities from the suburbs. This was due, in part, to downtown revitalization efforts, and the energy crisis. These shifts involved a new emphasis on rehabilitation and historic preservation rather than on urban design; a reevaluation of new towns; and an increase in public-private initiatives due to the transfer of governmental control from the federal to the local government level.

Michael Brooks, a member of the class of 1970, was assigned the role of devil's advocate. He questioned whether or not planning education and practice are evolving into separate entities. During the 1970s and 1980s planning programs grew rapidly nationwide. Programs cropped up at schools where scholarship was not a tradition. These schools hired scholars from other fields who had little sense of what planning entailed. This coupling of schools with scholars who were perhaps relatively uninformed about urban issues resulted in a gulf between planning education and practice. Brooks expressed the need for planning schools to seek out a larger cadre of teachers with transferable training and experience, as well as a real interest in planning. He encouraged more balance between the academic and practical approaches in order to "breathe new life into planning."

Land Use Panel Discussion

Professor David R. Godschalk served as moderator for the panel discussion concerning the land use curriculum and related issues. In his opening remarks, Godschalk stressed that the Department strives to provide the technical, analytical and interpersonal skills necessary in effective land use planning. The alumni panelists represented a broad range of professional occupations. Kathleen Blaha from Tallahassee, Florida works for the Trust for Public Lands; Nancy Jeton is Planning Director for Andover, Massachusetts; Dwight Merriam is an attorney practicing land use and environmental law in Hartford, Connecticut; and Charles Pattison is the Director of Planning, Building and Zoning in Munroe County, Florida.

Kathleen Blaha deals with a broad spectrum of issues and people in her work for the Trust for

Public Lands. Her work requires a range of technical and analytical skills: everything from assessing the ecological impacts and financial feasibility of a project, to identifying the positions of interest groups seeking to achieve certain ends. She emphasized the importance of a generalist planning education which gave her "enough of an expertise to deal with a large number of issues and groups effectively."

Nancy Jeton works in a more traditional capacity as Town Planning Director for Andover, Massachusetts. Her responsibilities, nonetheless, are just as diverse. The morning might be spent in court; the afternoon with real estate developers; and the evening with local citizen groups. Since the planner cannot be an expert in every field, he must be an expert in organizing, analyzing and publicizing needed information. Jeton stressed the importance of developing professional communication skills, and mentioned "Urban Development Guidance Systems" and "Urban Systems and Infrastructure" as courses particularly vital to the land use curriculum.

Dwight Merriam identified a number of areas in which a planner should be trained to work effectively in growth management. Because the field is still evolving, Merriam felt that the program should avoid offering growth management techniques by themselves. Merriam sees critical analysis as essential to planning education. He feels that, "We need to spend more time with planning students teaching them to be critics rather than proponents of planning methods. By being critics they will come to understand better the weaknesses of planning analysis." Essential tools for planners include instruction in quantitative analysis methods, statistics and computer skills. These skills will help to make planners better able to manage complex processes, to be effective organizers and directors of decision-making. Merriam also stressed the importance of familiarizing oneself with the language of site engineering and planning. He points out that, "If planners are to have credibility with the development community they have got to understand development plans and speak the jargon of civil engineers and site designers . . . Even planners who often work at the cutting edge of sophisticated growth management programs are going to have to occasionally participate in the day-to-day mud wrestling of project evaluation."

Charles Pattison works in a rapid growth area of the Florida Keys. He emphasized the importance of salesmanship and communication skills. Planners must be effective presenters and promoters. A plan or program of action can only be useful if instituted. This requires expertise in marketing and lobbying skills, traditionally neglected areas in planning education. Pattison lauded the development of the professional communications skills course offered by the Department which utilizes modern techniques, such as videotaping, to enable planners to practice and improve their presentation skills.

Community and Economic Development

Professor Edward Bergman focussed the panelists on a discussion of the UNC planning program's ambitions, and whether it is currently heading in the "right" direction.

Vernon George, from the class of 1963, brought a consultant's perspective to the discussion. He emphasized the importance of "deal-making" in the development process, and stated that deal-making need not be a pejorative term. In fact, it is an integral part of the planning process in which every planner (and planning student) must be proficient. George described several skills which he believed are essential to deal-making, and which should therefore be included in the curriculum.

The first skill is communication and interpretation of the written word. In addition to writing clearly and concisely, George included the ability to prepare graphic presentations and to interpret

Now . . .

technical data. The ability to use the spoken word is another essential skill. George said effective speaking included preanalyzing the audience, addressing the text, and summing up the main points. The planner must be able to analyze a problem and express the crucial aspects of it cogently. Finally, working well with people is an essential skill. Negotiation grounded in a real understanding of alternative viewpoints is both necessary and useful in interpersonal relations. George stressed the importance of teaching the dynamics of deal-making in order to equip the planning student with flexibility and with the variety of skills needed for effective deal-making.

Diane Reid, from the class of 1977, is the Director of Operations for the Camden Economic Development Corporation. The CEDC was established to create jobs in Camden, New Jersey. She added that creativity is essential to deal-making, particularly in eliciting funding. Although its original capital came from Community Development Block Grant funds, the CEDC currently operates independently on a four million dollar base. The Camden Economic Development Corporation must constantly derive new sources of funding. Possibilities currently under consideration include a reinvestment fund and a community loan program.

Michael Redmond, from the class of 1978, analyzes local economies and populations and develops employment programs for the Private Industry Council in New York. He recommended two useful skills that the DCRP should incorporate in its program. The first is analytical skill, which is necessary for determining how local economies function; identifying populations at risk; and merging both with employment opportunities. The second, is persuasive writing and presentation skill. A "good idea" remains only that until a decisionmaker or funding source is made to realize the need for a program or policy to implement the idea.

Professor Bergman explained that in order to work effectively with public and private sector actors, the planning student must learn a basic set of techniques before choosing a specialization. More important than acquiring planning skills, however, is that the student not lose sight of his planning goals. The challenge DCRP faces is whether to focus on practical skills and their application – techniques to deal with today's world – or to emphasize a broad outlook so that the student will be able to deal with constantly changing political, economic and social trends.

Real Estate Development Curriculum Panel Discussion

With Professor Emil Malizia acting as moderator, a panel of alumni spoke on their experiences in the real estate industry, and the DCRP's real estate program.

Professor Malizia began the discussion by summarizing the conceptual framework and central courses upon which the Department's real estate curriculum has traditionally been based. Real estate education, he stated, has been more of a complement to the student's general planning experience rather than a specialization in its own right. This is because it is rooted in core planning disciplines such as land use and site design. However, current students are interested in gaining expertise in real estate investment analysis in addition to learning the values, concepts and theories associated with a planning education. They seek this knowledge so that they may actively participate in the real estate field.

Robert Gladstone, President of Triangle Development, a private development company, categorized the development process into three broad phases: pre-construction, construction and post-construction. He then identified nine stages within these broad phases:

1. identification and analysis of opportunities, including feasibility studies
2. project development: identification of project users and their requirements
3. land or property acquisition
4. private/public interface
5. financing
6. marketing and promotion
7. project construction
8. property management
9. asset management

Gladstone thinks the Department has been successful in teaching stages 1,3,4 and 5. He feels that the Department could strengthen the real estate curriculum by teaching stages 2,6,7,8 and 9.

Sam Burns is currently working as a private developer in South Carolina and Florida. His public sector background enabled him to theorize on the planner's role in the development process. Burns feels that planners should infiltrate the decision-making process. He advocates direct participation in the real estate development process as the planner's means to achieving a better quality environment. By infiltrating the decision-making process, the planner is able to effect change "from the inside."

A planner can bring about positive changes more effectively by sharpening skills such as financial and market analysis; dispute resolution and negotiation; and by exercising the posture of being a reformist or a visionary. In dealing with development and developers, Burns warns that a planner must be careful not to forsake his sensitivity and values in exchange for the often tempting monetary rewards of private development. Although he agrees that educating planners about real estate is very important, he urged students not to "MBA their MRP."

State and Federal Planning

Professor David Moreau was moderator of this section of the conference. Panelists were Mary Joan Pugh (1976), Planning Director of High Point, North Carolina, Gerald Emison (1974), of the United States Environmental Protection Agency, Office of Air Quality and Standards, and Professor Gorman Gilbert, Transportation Planning Commissioner of New York City.

Mary Joan Pugh began the panel discussion by asserting that local governments must adapt to redefined federal, state and local relations brought about by the Reagan Administration's New Federalism. "The federal government is dumping its problems on the states," explained Pugh, "but the states *ought* to have a greater role (in policy decisions)." Policy at the federal level will focus on regional problems and there should be a more effective mechanism to alert states in advance about policy shifts in order to facilitate state level responses.

By redefining the capabilities and responsibilities of each level of government, New Federalism has redefined public and private sector relationships also. Private sector involvement in policy formulation and decision-making is increasing due to an increased reliance on private sources of funding. Planning, therefore, must become a part of the policy management process. Pugh sees evidence of this in the current shifting of the planner's role away from that of technician, and towards that of facilitator of policy.

Gorman Gilbert described his current experience as a transportation planning commissioner in New York City. He has observed firsthand the need for and importance of the regulatory agency in local planning. Gilbert recognizes that the traditional role and limited power base of planners must be reexamined since the political process in many areas has allowed important infrastructure systems to deteriorate. He said that politics often influences policy decisions to an extent as great as the best technical information available.

George Emison described federal and state relations as being frought with "creative tension." He outlined how two federal programs were misinterpreted in their implementation by state planning agencies. Regional planning agencies tried to keep Section 208 politics-free. Emison explained that "In succeeding, they failed." Section 208 was planning-oriented, not regulatory or decision-oriented. The regional planning agencies viewed planning as a technical process. They emphasized state-of-the-art processes when they should have connected them to real-world feasibility. They approached 208 as a set of requirements they had to fulfill rather than as an outcome they wanted to obtain.

The State Implementation Plan (SIP) addressed air quality and management, and described air quality and management outcomes. Regulations described how these desired outcomes were to be attained. But in attempting to implement the Plan with the regulations, the authors were forced to make sacrifices because the desired outcomes were difficult to attain. Moreover, even some of the "science" upon which the plans were based was "squishy."

Environmental Protection Agency funding to states is changing. Direct monetary support is declining due to spending cuts and the increasing independent role of many states in addressing local problems. Rather than throwing money at a problem, the new EPA approach involves providing technical support and assistance to state and local actors to help them gain technical expertise in environmental issues. Professor Moreau agreed that the need for technical support is critical at the state level. He said that states, as masters in program innovation, have begun to share their expertise with localities.

Planning in Developing Areas

Professor Dale Whittington acted as moderator of this session. Panelists were Ben Fisher (1967, 1977), Jim McCullough (1972, 1983), Professor Linda Lacey, and Mu Shinming, a DCRP PhD student.

The developing areas panel discussion included presentations by Jim McCullough and Ben Fisher. McCullough outlined what he believes to be some of the most important challenges confronting planning in developing areas:

What's forty years between friends?

1. Shelter assistance; defined as improving the existing situation in slums and squatter settlements, and developing housing programs that assist low income people to build their own homes.
2. Providing urban and regional transit.
3. Effective management and integration of programs on an urban level.
4. Expanding this management capability to the regional scale.
5. Establishing institutional delivery systems.
6. Land acquisition, especially helping municipal areas to assemble and control large amounts of land.
7. Cost recovery, including more effective pricing of infrastructure and establishing housing finance agencies.

With respect to adequately training professional planners for overseas work, McCullough stressed the importance of obtaining sound technical skills in conjunction with a conceptual understanding of issues affecting developing areas.

Ben Fisher indicated that roughly 20 percent of planning doctoral candidates are either from developing areas, or are interested in working in one. He stated that the majority of these people who return to their countries will enter professional practice at a very high level. They will be placed in charge of a large number of employees almost immediately, and will be responsible for management, hiring and coordination of personnel, and budgeting. In fact, entry level employment for many foreign planners often involves greater responsibilities than many American planners can hope to attain in the whole of their careers.

Planning decisions and program implementation in many developing areas usually occurs more quickly than in the United States. Lengthy review procedures typically do not exist to check and balance decision-making. Consequently, a highly placed decision-maker is under a great deal of pressure to "get it right the first time." To help the planner get it right, Fisher feels that educators must beef-up training in management; scheduling; project implementation; and the understanding of how institutions and the various levels of government that exist in developing nations work. □

Forum

Some Thoughts From the President

An Interview with Norman Krumholz

Russell Berusch **Heidi Walter**

Norman Krumholz has recently been elected president of the American Planning Association (APA). He served as Cleveland, Ohio's Planning Director from 1969 to 1979, and is now director of the Center for Neighborhood Development at Cleveland State University. Mr. Krumholz's primary professional concern involves working at the neighborhood level with lower income people in hopes of improving their living environments. He proudly admits to be a staunch advocate of rights for low-income people.

CP: As APA president, can you highlight some of the more important programs and services offered by the APA?

KRUMHOLZ: I think I can. The APA offers the services of their staff, the APA Journal, planners' bookshops and discounts on books for planners, and they offer what every professional organization offers: a forum wherein professionals can get together, share experiences, learn, and generally grow as professionals.

CP: As president, where do your priorities lie with respect to fulfilling new goals you might have envisioned?

KRUMHOLZ: Well, I laid out in my talk—my entrance talk at the Los Angeles conference last Spring—the objectives I have for the organization. They have to do with ending some friction between what used to be the AIP (American Institute of Planners) and ASPO (American Society of Planning Officials). This friction is still inherent in the APA, the division being between the APA and the people who call themselves the AICP (American Institute of City Planners). The latter claims to be the "professional" organization. My view is that a lot of the charges and countercharges that have taken place between those two wings have been destructive to the organization.

I am not a separatist. I believe that the merger in 1979 between the AIP and ASPO which produced the APA was a good one. But historically, there's always been that division between the generalists, who were under the banner of ASPO, and the technicians or the "true professionals," who were under the banner of AIP. That problem has not been eliminated by the merger; it's still there in another form. But my position has been that conflicts—including the charges and countercharges that have flown back and forth between the groups' members—have been destructive. We certainly want to reduce them to a minimum and go forward as one organization. The last thing in the world—in this country, certainly—that planning needs is the vision of two organizations representing planning, and squabbling among themselves as to what planning is. We've had enough problems with that historically as well. So that's a top priority.

The other priority—much more important than the first one which, I think, we have pretty well muted—is to make planning much more visible. In that regard, I suggest the creation of a number of new committees, including an op-ed committee, on which I myself hope to serve. An op-ed committee would enable planners and planning educators to join together and write up—for popular consumption—some of the more interesting, more progressive activities that have taken place in the field. That

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Norman Krumholz.

would mean you'd have to have a bunch of people who were capable of, and interested in, writing not for professional publication in the APA journal or some refereed journal, but rather, for the Sunday New York Times Magazine Section. If done well and properly publicized, this would help give planning a little more visibility in the country at large, and give the public a better sense of what planners are and what they do. So the increased visibility of the profession is a major objective as well.

I think the third thing is the need to turn planning away from our continual focus on fads, in which the leadership in the profession flits from one objective to another. If it's not environmental protection this year it's selling development rights. We sometimes tend to act in a more faddish way than we should, while ignoring some very fundamental problems to which we have to continually address ourselves. Those problems have to do with the reality of concentrations of poverty located in many of our great cities, with the many effects of racial discrimination, and with the fact – the reality – that we have not done very well in the past in terms of shaping a desirable form for the American city. As far as shaping a better city goes, we need to do a lot better in the future, particularly in the fast-growth areas of the country where new growth is going ahead and all or many of the mistakes that characterized planning in the past are apparently being repeated in the present.

So, it's those three major objectives: number one, to end or at least minimize internal conflict within the profession; number two, to make planning as an art, science and profession much more visible and much more respectable; number three, to turn ourselves back to the central issues which we have never really resolved and which still vex our society.

CP: Would you like to comment on the APA's financial situation? Did not the Washington office close?

KRUMHOLZ: Leaving aside the question of Chicago and Washington, the APA is in fairly decent financial shape right now. The national convention has been quite profitable, the bookstore is profitable, and our planning magazine which, incidentally, won an award last year for quality, is up 65 percent. So while it's not fat city, we're doing better than we have. In terms of the issue between Chicago and Washington, that's still being worked on. My guess is that ultimately we will close down some of the operation in Washington and move some of those functions – not a great deal of them – to Chicago, where the rent is cheaper. At the same time, though, we will maintain a presence in Washington. I think it's important to have a presence in Washington. That's where the money is, that's where the great imperial city is, and that's where we should be to lobby or do what we have to do for our own objectives.

CP: As Center for Neighborhood Development Director, you are certainly aware that recent cutbacks in federal money earmarked for planning, capital improvements and community development have caused public and non-profit agencies to tighten their belts. And, in the near future cutbacks threaten to be even more severe. Keeping this in mind, please comment on alternative strategies public planning and community development agencies can adopt to continue effective planning throughout this harsh budgetary climate.

KRUMHOLZ: Partially by turning to other resources and partially by doing a better job with what you've got. In the nonprofit business, anyway, the community of philanthropic institutions is playing a larger role. At least it is in Cleveland. Of course we're very fortunate to have two very generous foundations in town, who together give away about 25 million dollars a year, and Standard Oil of Ohio, which gives away another 10–15 million dollars a year. So that's been a good back-up and has been very helpful to the nonprofits in the Greater Cleve-

land area. But we also have some resources like the Enterprise Foundation, the Ford Foundation, and LISC (Local Initiatives Support Coalition) that have been very active around here as well.

The city has been able to draw on some of these resources as well, but I think in times of adversity—or cutbacks by the Feds—we tend to look toward the replacement of some of those resources at a different level of government, certaintly including the state. The state is playing a larger role in funding planning activities in Cleveland, and I presume in other places as well. Also, you look for different ways to make yourself useful, in a way that you become a more important part of the budget. This way, budget-cutters might think twice before they cut planning since they're doing such a wonderful job in this area or that area. In a word, you hustle. There are ways to make up shortfalls in staffing for planning agencies and for nonprofits.

CP: What are the prospects for building or rehabilitating housing for low-income people? The federal government is getting out of the housing business and tax reform will limit the attractiveness of real estate syndications which neighborhood groups often utilize.

KRUMHOLZ: That's a much much harder question than the first one. I think planning and planners, whether they're working for government or nonprofit agencies, will survive. It'll be hard-going, but they'll survive. Providing low-income housing, however, for the most part requires long-term subsidies that are simply going to be dependent ultimately on the federal government. My guess is that we'll go through a period of rather harsh cutbacks in the provision of low-income housing, until the presence of homeless people and people sleeping under bridges will emerge more and more. Then I hope we'll come back to our senses and provide, through a more realistic approach to housing, what we're now cutting out through these draconian cuts at the federal level.

I think that in the near term we're going to have to live with less resources in housing than we have. In my view, that's because the country—it's not only Reagan, though Reagan's an epitome of this kind of thing—has taken a turn toward a more conservative kind of objective. And my guess is that there will be fewer and fewer resources coming for housing than there have been in the past. So that's going to be a much more difficult thing to resolve.

CP: Some of the country's more quickly growing cities such as San Francisco and Boston have been implementing "linkage" programs where developers, prior to getting their building permit or Certificate of Occupancy, are required to pay a fee to be used for providing housing for low-income people. Similar concepts are "exactions" and "impact fees." Are programs of this sort workable in the long run? Are they intelligent responses to subsidizing federal assistance?

KRUMHOLZ: I think yes. Yes to both questions. Not only are they workable in the long run as Boston and San Francisco have demonstrated, but they also compensate for a portion of the federal shortfall. By no means do they make up for the full range of the federal shortfalls, but they do provide another way that cities can take advantage of hot growth areas, move toward more balanced growth, and provide for some of the people who are simply falling out of the mainstream of economic development. I think it's a perfect response and I commend all the planners who are working on this—in some extraordinarily ingenious ways, incidentally—around the country. I think it's a great idea.

CP: Are such programs being used in Cleveland? Does the economic vitality of a city bear on the effectiveness of them?

KRUMHOLZ: Such programs are not being used in Cleveland, and they should be in my view. The people who are responsible for those decisions, which are essentially political and economic decisions, apparently have continued to believe that Cleveland is a cool market, and that the function of government is to try to provide as much on the shelf as possible in terms of inducements and goodies and subsidies in order to make private developers do what the public wants them to do. I think that there's a lot more room for bargaining than is immediately apparent, and I think if public officials were to test this, particularly with regard to bargaining as a quid pro quo for public subsidies, I think they might find a lot more willingness among developing communities than they have experienced so far. I think the possibility is there, in other words, for some hard bargaining. Unfortunately, it's not there in terms of the political willingness to strike those positions.

CP: Is there a political environment which is unique to Cleveland that might impede the institution of such programs more than in other "distressed" northeastern cities?

A remnant of urban renewal—Hough neighborhood, Cleveland.

KRUMHOLZ: No, I don't think so. I think these cities are in a sort of mindset that they are in cool markets and that they've got to give everything away. St. Louis is a wonderful case in point. St. Louis has apparently rebuilt its downtown by layering all kinds of public subsidies in eminent domain—conveying eminent domain to private developers—for years and years now. There are other cities who have suffered great losses, who feel as if they simply have to give everything the developer asks for in terms of subsidies. I think that a lot more can be done in that area, but there has to be a political will to explore the range of those possibilities. And so far in cities like Cleveland, and as far as I know, Detroit and St. Louis, there has not been the political will. It seems to me, though, that even in a "cold" city, if you've got a political base or an electorate that might clearly see such linkages in their own political interest, then it'd seem that the politicians would want to jump on that bandwagon—at least for narrow political kinds of objectives. But in general I think linkage is a good idea, and I think the planners who are involved in creating these linkage arrangements right now are on the cutting edge of something very important and should get a lot more recognition than they have been getting.

CP: Florida has recently passed the Local Government Comprehensive Planning Act. It requires every municipality to produce a comprehensive land use plan, along with housing market analyses and so forth. Do you think this is a good approach and would you like to see something like it in other states?

KRUMHOLZ: Well, I think that's desirable if the housing analyses include a strong thrust toward providing decent housing for low-income people, particularly low-income minorities. For a long time I have taken the view, and continue to do so, that many of the problems of the declining center city are fundamentally based on racial impaction and concentrated poverty. When you scratch into the functional issues we deal with—rotting neighborhoods, bad schools, transportation shortfalls—we're talking about race and poverty very quickly. It seems to me the planning process which mandates some attention be paid to those issues is an important one, and to the extent that regional planning, wherever it takes place, can effectively address those issues, that's darn good planning: good planning and good policy for the city, the state and the country as a whole.

Often, however, regional plans deal only with matters such as engineering, water pollution control, and transportation. And that's O.K. Obviously you want to deal with those in regional rather than in simply jurisdictional ways. But you're not dealing with the fundamental social and economic issues which are so vexing to our society. You've got to deal with those somehow, sooner or later.

CP: Would it be true to say that the majority of regional planning institutions today are simply advisors?

KRUMHOLZ: Yes, but worse than that. My experience with regional planning agencies in the Pittsburgh region and much more extensively in the Cleveland region, suggests that they are organizations

that don't do very much more than transportation planning and transportation reviews. And the reviews are all simply rubber stamping—noblesse oblige activities: you approve my application, I'll approve your application. The only thing the members of the boards of these regional agencies do is look like council members elected on a ward basis, so their little piece of the action doesn't get less than its fair share. And that kind of thing is a far cry from regional planning in which somebody actually sets goals, sets priorities, and says, "you get and you don't." That's control. Very few of these regional agencies have any such thing. Most of them don't even imagine that they could reach for such a thing.

CP: Is the planning profession in an up or down cycle? Do employment prospects for planners look bright?

KRUMHOLZ: I think it's floating the line in terms of up or down. The number of students, for example, who are enrolled in graduate schools offering graduate degrees in city planning is the same as it was in 1975. There were about 4000 then and 4000 now. There are about twice as many schools, however, scrapping over the students.

With regard to jobs in planning, I suspect that there are about as many and maybe a little more because of the growth that's taken place in some of the country's more quickly developing regions, and because of the interest on the part of states and municipalities in harnessing and controlling that growth. I think planners may have to work out some different roles, or modify roles for themselves, but I think the market for planners is probably a good one and will continue to be a good one. You may not have a situation where 80 percent of all planners with masters degrees work for government, which is what our situation has been in the past, but the market is there and the kinds of education kids get in planning will, for the most part, suit them for occupations in other areas as well.

CP: Could you speak a bit about career alternatives with neighborhood-based and non-profit groups.

KRUMHOLZ: That is an area, it seems to me, where there hasn't been a great deal of attention paid. The non-profit sector, which includes neighborhood-based CDCs (Community Development Corporations), nonprofit housing corporations, philanthropic agencies of one sort or another, foundations, and local and national corporate giving activities, are begining to claim a larger and larger percentage of planners. And quite appropriately so. In many cases they're seen as a desirable method of delivering services—a good alternative to traditional methods of delivering certain kinds of services—and they are growing all over the place. I think we ought to pay a lot more attention to their growth, both in terms of seeing them as reasonable job resources for graduates, and in shaping our curriculum at the masters level to train kids for those kinds of roles. They're important roles.

I believe that a lot of people are drawn into our profession because they want to do good. They don't simply want to make a living, but they do want to do good too. They're reformists, in a way, and we educators do a stinking job in training them for a reform role. It seems to me that if we have some cognizance of the fact that jobs are available at the neighborhood level and in non-profit CDCs, this is an opportunity for us not only to train our people for taking those jobs, but also train them, however weakly, for these kinds of reform roles that are important to young people coming into planning.

CP: What advice would you have for someone interested in pursuing a planning career today?

KRUMHOLZ: I'm much more of a generalist, and that's probably because in my experience in planning I have much much more success with generalist-type staff than I have with specialists. Usually a planning agency, even in a big city government, has relatively few professionals on hand. In Cleveland, for example, I had maybe fifteen professionals—that is to say, people with masters degrees in city and regional planning or an associated degree. Considering the range of things that we were involved in, I needed a lot of people who could run very fast on a lot of different fronts. That's a generalist: one with good training and good technical qualities, but also one who digs the issue and wants to hustle. So I tended to look for well trained generalists who were cued in to looking at the world pretty much the way I was looking at it, who wanted to work very hard on a number of very serious issues, and who weren't afraid of working on many different kinds of things. □

From Planning Practice to Academia

Norman Krumholz

By tracing his journey from city planning director to director of a technical assistance center within a large university, Norman Krumholz explores the importance of bridging the gap between the study and practice of planning. In so doing, he states that each of these very different worlds has a great deal to gain from the other.

Norman Krumholz has been elected president of the APA. He served as Cleveland, Ohio's Planning Director from 1969 to 1979, and is now director of the Center for Neighborhood Development at Cleveland State University.

I left Cleveland City Hall in 1979 after ten years as city planning director. I had not lost interest in the excitement and importance of local government. To the contrary, I believed and still believe that local government is a place where a planner with ideas to sell can successfully impact public policy for the benefit of many people outside the economic development process. I also remain convinced that planners can help strengthen the capacity of political leadership to respond to a responsible conception of the public interest.

In order to help shape public policy, planners must influence other, more powerful actors, such as the mayor and members of the city council. This requires both a program and access to these politicians. In 1979, following Cleveland's bitter recall election and the subsequent default of the City on its fiscal obligations, I lost my access to the mayor's office. Under unceasing attack, Mayor Dennis Kucinich adopted a closed, bunker-like position and no one except his closest confidants were allowed into the policy-making process. Since I was not a member of the mayor's inner circle, and had no chance to influence events, it seemed appropriate for me to leave and try to implement my ideas from a different platform.

The vehicle chosen for this effort originally had nothing to do with Cleveland State University. The vehicle was to be a free-standing, non-profit, neighborhood oriented technical assistance center with its own board and staff. This center was to be funded by local and national foundations and perhaps by the city as well. Its purpose was to provide technical assistance and intermediation with government agencies and banks on housing and economic development projects undertaken by neighborhood based community development corporations (CDCs), which were growing in number, competence and programmatic range. In many respects, the center, which a former Cleveland planning staff member and I designed, was to carry on the neighborhood-nurturing work which had been underway in the city planning department since the 1970s.

We believed that working with neighborhood organizations was an appropriate part of what we called "equity planning": an effort to advocate the needs of Cleveland's poor and working class people and to provide direct planning services to those residents of Cleveland who had few, if any, options. We shared common agendas with these groups on a number of issues. For example, they provided a countervailing political force to demands by downtown interests for tax relief and capital improvement projects; they pressured city bureaucracies to improve the delivery of public services to the city's neighborhoods; they were willing to try and rebuild their neighborhoods' physical environment; and they argued that neighborhood considerations were frequently more important than regional considerations and that grandiose programs must sometimes

be set aside in favor of basic needs. We frequently agreed on these points. So the planning department provided staff support and technical assistance to these neighborhood groups. In return, the neighborhood groups supported issues of joint interest with citizen pressure at council hearings. Now that these groups were becoming more organized and beginning their efforts to rebuild their own disinvested neighborhoods, we wanted to continue to help. We drafted a proposal which we asked local foundations to support.

There are two large foundations in Cleveland. Together they issue grants of about $25 million a year. Since both foundations had actively supported neighborhood development, they were our prime targets. The first received us positively. It told us that our idea for a Center for Neighborhood Development (CND) had merit, but that CND probably would not survive over the long term as a free-standing agency. As an alternative, they suggested that we become a division of a church-related agency involved with community organizing that they were already funding. We agreed. We were familiar with the church group and its staff, and had enjoyed a good working relationship with them.

The second foundation which was asked to share the funding of CND suggested a different arrangement. It suggested we join the College of Urban Affairs at Cleveland State University (CSU). The College was new, and it was committed to public service and applied research "in the great laboratory of the city." The foundation believed we could strengthen each other.

We had never considered becoming part of a college. While we had always tried to maximize the constructive interaction between city hall and the university, our experience with academic researchers had not always been positive.

In the 1970s, for example, the planning staff had become involved in a federal dial-a-bus demonstration program for the elderly and handicapped. The staff had identified the program, applied for the grant, and was acting as advisor to the Regional Transit Authority (RTA) which was administering the demonstration.

As part of the demonstration, the Department of Transportation hired a local university-based research organization to study the characteristics of both users and non-users of the service. The research contract required the final report to be submitted by mid-February. However, the program ran out of funds by the beginning of February. The decision-making process could not wait for the evaluation of the dial-a-bus program to be completed as originally scheduled. Still, despite the urging of staff, the researchers refused to be rushed. They were clearly not going to release their findings until they were 99.5% confident of their data.

So while the academic researchers under contract waited for their interview results to be coded, keypunched, and statistically tested, a member of my staff hand-tabulated some of the responses of the dial-a-bus user survey. Her analysis, though based on data in which we had somewhat less than 99.5% confidence, succeeded in dispelling the rumor that most of the riders were wealthy ladies from a silk-stocking suburb going to a fancy restaurant for lunch. It indicated that the vast majority of dial-a-bus riders had extremely low incomes, lacked access to an automobile, and considered the door-to-door nature of the dial-a-bus service to be its most significant attribute. The one-page presentation of these findings, which we gave to key RTA board members and the media just prior to their decision on the continuation of service, had a great impact on the favorable decision to continue. The researcher's final report went largely unread when it appeared four months later.

the researcher's report went unread

Cleveland Regional Transit Authority.

we questioned their values

The experience made us wary of consulting academic researchers. We were not opposed to the consultants' insistence on statistical validity; that is what the building of knowledge is all about. But they were impervious to our argument that improving the statistical purity of their research would not make it more useful to RTA, but would only reduce its likelihood of arriving on time and being used at all. We questioned their process skills, their value systems, and their basic understanding of the essential need for timeliness in policy formulation.

Our misgivings aside, the foundations agreed on the institutional base issue, the College was receptive, and so the deal was struck. The CND would become part of the Urban Center, a public service, research and out-reach division of the College of Urban Affairs at CSU.

The arrangement has been in effect since 1979. During the first two years all of CND's funding came from shared contributions from the two local foundations. Within a short time, the Ford Foundation awarded us a grant for a demonstration program using neighborhood organizations for residential energy conservation. A year later the Standard Oil Company began supplementing CND's energy-conservation activities with grants. At the same time, CSU assumed part of our funding. After the City of Cleveland and the State of Ohio adopted CND's neighborhood-based model for its energy conservation programs, we began receiving financial support from the Ohio Department of Development. Throughout this time the foundatons, while admiring our efforts, made it clear that their continued support depended on CSU's willingness to support CND. In 1985, CSU agreed to contribute two years of support, amounting to about half of our total budget.

having a significant and unique impact

The reluctance of the University to provide support for CND puzzled us. CND had received favorable publicity since its inception. It was highly visible and positively viewed by local, state and national institutions. Outside reviewers of our activities agreed we were having a significant and unique impact on the quality of life in Cleveland's neighborhoods, as well as in aiding the University and the College to fulfill their outreach and public service missions. Among our most important accomplishments were:

Technical Assistance: CND provided technical assistance to over 30 Cleveland neighborhood-based organizations, community development corporations (CDCs) and non-profit housing corporations. Subsequently, these groups developed and implemented a major housing rehabilitation program in which over 500 units have been produced for low and moderate income families. The Center became well-versed in utilizing complex techniques such as tax syndication to support these projects.

CDCs have also executed economic development projects including a multi-use arcade and a recycling plant. The Center for Neighborhood Development has developed a major energy conservation program involving 12,000 residential energy-audits, 4,200 retrofits with an average payback of 27 months, and 60 new jobs for neighborhood residents.

Applied Research: CND evaluated the cost-effectiveness of energy conservation programs for the State of Ohio, and is now under contract for a second larger study. Our work with a local housing organization led to the passage of a new state law which allows community groups to become court designated "receivers" of abandoned homes. Center staff was crucial in establishing a statewide association of CDCs and in assisting its members to gain support from the state for the first time. Center staff not only helped create the Cleveland Housing Court, but helped analyze the Court's procedures, including recommendations for improvement. Members of the CND staff serve on the state's Energy Action Council, the city's Community Development Block Grant (CDBG) project evaluation committee, and the board of the Cuyahoga Metropolitan Housing Authority.

Facilitation: The Center provided research support and facilitation for a number of public-private collaborative efforts. For example, CND is given credit for creating several for-profit CDCs, including the Bank on Buckeye, which has been cited by the U.S. Comptroller of Currency as a model for community-bank cooperation. CND staff also helped create a neighborhood safety coalition with a task force made up of the Greater Cleveland Bar Association, twelve neigborhood organizations, and state and local law enforcement officials.

In addition, CND played a role in the development of the College of Urban Affairs as a respected urban college. Staff members have employed students to work on their projects, served as guest lecturers, published in refereed journals and books, and developed new graduate and undergraduate courses. One new studio course involves students with three city departments, area politicians and bankers, the neighborhood CDC and local business

Opportunities for neighborhood development.

persons. By helping to convert textbook knowledge into real-world applications, CND has increased public-private acceptance of the College's relevance to the Cleveland community.

And yet, despite the contributions listed above, the University was slow in assuming its present position of helping to support CND's budget. The delay, I believe, was due in part to University economics, which often do not permit support for technical assistance within applied centers. The delay was also due to a basic difference in objectives. CND was interested in building the competence of the neighborhood groups and helping the neighborhoods in general. The University saw as its primary role the education of students. These are not necessarily contradictory objectives, but may have been so perceived by the University. It was inclined to judge CND not by its success or the positive publicity it received, but by its impact on the school's academic growth. Initially, CND was not seen as relating in a substantive manner to the enhancement of the University's academic program. Hence, financial support was not immediately forthcoming.

I believe this problem has been resolved. The University's leadership now sees excellent reasons for pushing CND's role and helping to build its support base. CND is recognized as an important element in expanding classroom activities, providing students with broadened opportunities for internships and jobs,and strengthening the college's external relationships. The Center's challenge in the years ahead will be to maintain its outreach and neighborhood effectiveness, while also contributing in a substantive way to the academic needs of the University.

What else has been learned in these six years of creative tension that might be of use to planners interested in moving from planning practice to the academy, and especially to planners interested in setting up university-related technical assistance centers?

First, neighborhood-based redevelopment efforts work, and university-related technical assistance centers can help them work better. Neighborhood CDCs can and do play an important role in assisting the people and places left behind in the urban development process. Often, CDCs can take on problems and tasks the market or government cannot begin to address. In Cleveland, these efforts have produced a major low-income residential rehabilitation effort, a successful energy conservation program, and a variety of business projects that generate jobs, spur the local economy, and promote revitalization in deprived areas.

These efforts will not get everyone back to work, or reverse the decline of Cleveland's manufacturing industries, but they can soften the impact of decline, provide useful work for the unemployed, and sustain morale. They can give us an opportunity to restate our compassion for human needs and our continuing concern for greater fairness and justice. They also give planning educators an opportunity to train their students for modest but meaningful reform roles. This fits with the objectives of many students who continue to be drawn to the planning field because they want to devote their professional lives to improvement and reform. Support of these efforts is, in my judgement, precisely what an urban university ought to do, despite the fundamental differences between town and gown.

Educators should also note that CDCs have become important political and economic actors in many American cities. Increasingly, local and state governments, foundations, banks, and corporations are recognizing CDCs as significant—even preferred—vehicles for implementing urban initiatives. The City of Cleveland, for example, responded to major cuts in its 1987 CDBG allocation by embracing CDCs and non-profit housing providers more closely, and by placing the jobs of its own staff of city planners at risk. A growing number of city planners now work for neighborhood-based and other non-profit agencies. City planning educators should acknowledge this new reality and prepare their students for it.

the university versus the world of planning practice

Second, the university and the world of planning practice are very different worlds, characterized by conflicting values, language, and rewards. The status and treatment of people who hold the PhD degree is a case in point. City hall often uses PhDs as consultants but they are rarely hired for permanent positions. There is not a high premium placed on an advanced degree. In my ten years in Cleveland City Hall, for example, I can recall only one PhD who was on the city's payroll. Most city employees were high school graduates with some college training. As a result, the group of planners that I assembled for my staff in city hall, most of whom had Masters Degrees, was often seen by other city bureaucracies as an intellectual elite.

In academia, by contrast, the Masters Degree is a barely acceptable credential for teaching, and then only because it is recognized as the terminal degree in a professional field. In my own case, I suspect it was less my long experience as a planning practitioner that resulted in a tenured academic appointment than it was the unique nature of that practice and the publication record my colleagues and I established while in the field. Most planning practitioners without PhDs who want to teach at the university level will probably find it difficult to be fully accepted.

There are good reasons why the PhD is important in academia. While it is not absolute proof of scholarship, most holders of the degree place heavy emphasis on research and publication in refereed journals. They must, since these are the criteria used by most university departments in decisions involving hiring, promotion, and tenure. So "success" in academia is based on the PhD, a productive history of publication in refereed journals, the promise of more productive research, and tenure. A practicing planning director, on the other hand, may be judged "successful" by the size of his own salary or the growth of his department's budget, by his "innovative" or "visionary" program, by his ability to be favorably received by the media, or by his simple ability to survive.

The insistence of the academy on the PhD as virtually the only way into teaching is, in my view, unfortunate. There is an enormous distance between planning theory and practice, and thoughtful practitioner-teachers who have faced the organizational complexity of city bureaucracies can provide their students with the understanding and skills that may make them more effective and useful planners when they are in the field.

Insisting on the PhD also weakens the possibility that the applied research provided by centers such as CND will become part of a planning program's curriculum. Conversely, such emphasis on the PhD weakens the utility of traditional university research aimed at solving city problems. That research is often directed at questions of efficiency and economy of means; at trying to get more output at a given cost. But a researcher who is not deeply familiar with city bureaucracies may assume a level of managerial skill and persistence which is rarely present in city governments. To improve the quality of recommmendations and the probability of implementation, the researcher must know that the city's influence on its environment is tightly constrained. To admit thoughtful, reflective practitioners who understand the nature of those constraints on teaching, even if they lack the PhD, is to substantially improve the scope, insight and utility of the teaching process.

Third, the notion that the city is a laboratory and that the urban university is ideally situated to experiment in that laboratory in order to develop solutions to the problems of the city is a nice idea, but it does not hold up. Most traditional academics are not interested in applied research. They may be interested as individuals or as citizens, but as career academics they must try to rise within their own reward system. They will find it very difficult to do so unless they satisfy the demands of their peers for publications. Traditional research projects are more likely to satisfy the need for publishable articles in a timely, systematic fashion.

Applied research projects are often long-term, idiosyncratic, and changeable. Often they cannot be replicated because local conditions vary so much. Of course, it is precisely this variability which makes these projects so valuable as teaching tools, but it

is risky research for a budding academic. And, although the university may proclaim equal concern for education, teaching, and public service, it is suspected of placing more emphasis on research than on public service and teaching.

It is not only the criteria, but the style of research that differs as well. Traditional academic research seeks to filter out the values of the individual participants and arrive at an "unbiased truth" which deserves widespread acceptance, whether the receivers of the information find it palatable or not.

Applied research, moreover, must be built on shared commitment and trust. Once researchers become involved with people and neighborhoods, bonds will be formed which bring with them mutual obligations. This does not mean that researchers and technical assistance providers must be captured by their clients, but that both must develop a sense of confidence and trust in the other as they cooperate over the long term of the project.

Fourth, advocating neighborhood interests and the interests of poor and working class constituen-

Inner-city blight.

The researcher must be restrained, careful, dispassionate, and conservative. The academic who violates these stylistic norms is in danger of losing his credibility. By contrast, the leaders of neighborhood organizations tend to be competent managers who are also value-expressive. To lead they must be bold, persistent, and opportunistic. When they have to, they must be able to mobilize political power. The neighborhood leader who adopts the detached style of the academic is just as likely to lose his credibility as the academic who "goes native."

cies in general, is easier from inside the academy than from inside city hall, as is program development. Implementation is more difficult and depends heavily on cooperation from city hall.

It is a question of resources and influence. Within city government, a planning director may not have resources of his own to allocate, but he normally has an opportunity to influence the operations of line departments and the allocation of their budget resources. The planner's recommendations may lack the political support of a powerful constituency; the

mayor may have higher priorities; the council may disagree; but the planner's persistent interaction with city bureaucracies and their top officials puts him in a strong position. Access and persistence are key. Political decision-making is not a single act, but a process requiring one's protracted participation. A committee insider with information, a point of view, proposals, and access enjoys a great advantage in political decision-making. He also enjoys the luxury of great resources. Even in the most distressed cities, the department's budget for housing rehabilitation, or small business loans, or neighborhood parks is substantially larger than the best-funded CDC in town.

access and persistence

Without those resources, the best ideas in the most capable hands may not see the possibility of implementation. Shaping city policies from outside city hall is a bit like manipulating radioactive isotopes with remote control clamps. But it can be done, and the impact of one or two convinced officials within a city department can be quite remarkable and quite essential.

Fifth, university-related technical assistance centers are apparently most vulnerable during their first few years. For this reason, the first staff members and assignments must be chosen with particular care. They must be able to provide useful, creditable work to their neighborhood clients, to their funding sources, and to the university's mission. The primary objective is service to the neighborhoods, but staff who are also interested in involving students in their projects and in writing about the projects are especially valuable. To the extent possible, initial projects should have a high probability of success. But the wise center manager will not avoid risks. If he is doing his job, the technical assistance center manager should be taking risks in institutions where risk-taking is sometimes questioned. To continually play it safe is irresponsible and will not strengthen the center with clients or funders. It may in fact condemn the center to irrelevancy.

probability of success

Finally, budget problems within technical assistance centers such as CND are serious and continual compared with those inside city hall. From the moment I entered Cleveland City Hall in 1969, the city was wracked with one fiscal crisis after another. Various remedies were proposed by various mayors: attrition of staff; pay-less work days; shortened work weeks; tax increases, and so on. Through ten years of fiscal crises and a default I heard of no city employee who ever missed a paycheck or a raise. Outside of city hall, however, money problems are real and constant and affect both the technical assistance center and its clients. The center must seek funding for its own survival, but it must also help its clients in their resource development. Who needs a technical assistance provider without clients? Consequently, much staff time must be spent on resource development.

Many of the issues identified in this paper have been identified by others. Along with them, I believe technical assistance centers are of significant importance to the urban university and to its quest for academic excellence and public service. I believe many public universities will come to share this view in the near future, if only because such centers build positive political relationships with other schools and with the many other publics of the university. They also do an effective job in leveraging marginal university resources.

In addition, the experiences of technical assistance centers can be useful to planning education by providing studio courses and case studies. In studio courses, students deal with real planning problems and issues. They develop practical planning skills and an understanding of key actors. They learn the dynamics of client relationships and obtain experience in working as part of a group or team. Case studies facilitate role playing and help students acquire the tools for political analysis.

Studio courses and case studies are vital in preparing students who lack planning experience. They can also attract students who have practical experience but want to develop it further by obtaining a professional degree. The latter group can play an important role in interacting with other students and enriching the learning environment.

Universities interested in building technical assistance centers could take two steps to greatly facilitate this process. First, they could give individual academics the opportunity to devote more of their time to applied research without losing academic status, prestige, or income. Second, they could adopt the view that "success" in these efforts is to be measured not by papers published or contracts received, but by actual improvements in the governance of cities and the lives of city residents. □

Putting Visual Impact Assessment to Work

Gail Fischman

Coastal communities, especially those under substantial development pressure, are becoming increasingly aware of the need to preserve unique visual resources. The purpose of this article is twofold. First, it reviews key studies which advance methodologies for incorporating visual impact techniques into an area's land use planning guidance system. Second, it evaluates these studies in terms of their ability to effectively and efficiently define, quantify, analyze and utilize visual resource information.

Introduction

Land use planning in coastal communities can help to ensure that environmentally critical areas and unique natural resources are protected and perhaps enhanced. Pressure from private and public development has forced coastal communities to assess their future environmental goals. A coastal management plan can function as a land use guidance system to help express the goals of a community.

The land use guidance system can be thought of as a process made up of four phases. The first phase is problem definition, the second is solution finding, the third is systems analysis, and the fourth is testing and feedback. The problem definition stage is what Kaiser calls "tooling up studies" (Kaiser 1971). One task of this stage is to "sharpen the understanding of the value structure" of a community. These tooling up studies can include such things as population projections, economic projections, ecological studies, and even visual impact assessments. Chapin and Kaiser also mention a study (or studies) to establish the scope and focus of the system. This can include determining the best locations for development, historic conservation, and encouraging and discouraging land uses in specific locations.

This is where visual impact assessments fit into the land use guidance system. When a coastal community is being pressured for land development it must be able to "compare impacts of alternatives of public or private development proposals to each other and to standards" (Chapin and Kaiser 1979). These standards can be generated from public participation in visual impact studies. A community can then determine if a new development project is in a suitable location and, if it is, how its visual impact can be mitigated.

Both NEPA and CZMA in their guidelines require that environmental aesthetics be considered when undertaking any federal and various other projects. Specifically, NEPA mandates that:

> The Federal government use all practicable means...[to] assure for all Americans safe, healthful, productive and *aesthetically* and culturally pleasant surroundings...[and to] preserve important historic, cultural, and natural aspects of our national heritage. (NEPA 101[b](2,4))

State coastal management plans also make mention of preserving aesthetic and cultural features of the coastal environment. North Carolina, by passing their Coastal Area Management Act (CAMA) in 1974, has recognized the need to protect many important features of its coastline. Pressures from growth, industry, conflicting land uses, mining, transportation, energy facilities, tourism, and recreation have led North Carolina to adopt policies which will enable its population and tourists to fully enjoy the "physical, aesthetic, cultural and recrea-

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tional qualities of the natural shorelines" (North Carolina Coastal Management Program [NCCMP]).

policy statements are often ambiguous

The state has issued policy statements on a number of coastal issues (e.g., recreation, tourism, beach access, outer continental shelf). However, some of the terms in the statements are ambiguous and vague. For example, one policy statement on tourism says:

> To assist in the sound development of the seacoast areas of the state, giving emphasis to planning and promoting attractions and facilities for travelers in these areas; with particular interest upon the development of the scenic and recreational resources of the seacoast. (N.C.G.S. 113.14.1)

The statement shows a commitment to protect the aesthetic resources of the area, but provides no means for achieving it. Also, what do "sound development and scenic resources" mean? Along with state regulations, communities must decide for themselves what sound development and scenic resources are. Though there are many issues involved in protecting and enhancing the coastal environment such as growth management, industrial control and natural disaster mitigation, this paper is going to concentrate on minimizing the visual impact of development upon the coastal zone through a review of methodologies and participatory procedures. The main premise of this paper says that before any action (development) takes place, towns should assess *their* visual attitudes about *their* community. Instead of being reactionary, a community can be ready to judge a proposed development project on criteria which have been set out and tested beforehand and to suggest improvements.

Participation

redevelopment and development processes

The visual impact studies can be conducted by professional planners and landscape architects or by these professionals in conjunction with the citizens of the community. Chapin and Kaiser suggest that "guidance system planning must build from a continued foundation of the public interest. . . ." Also, the guidance system, while incorporating the public interest, should consider redevelopment and development processes and the political and institutional contexts as well (Chapin and Kaiser 1979). Since the passage of federal legislation, specifically NEPA in 1969 and CZMA in 1972, public participation has been required in federal planning projects. Though participation has been mandated, there have not been any guidelines set forth as to what type of citizen involvement should occur.

There are three main types of citizen involvement. The first type is education/information, which is essentially public relations. Techniques of education/information include films, brochures, lectures, newspaper articles and school programs. The second type of involvement is review/reaction, which includes public hearings, surveys, and public meetings. The final type is interaction/dialogue. This orientation is one in which the citizens have the most to contribute to the planning process. Workshops, charettes, advisory boards, and special task forces are just a few of the mechanisms employed in this category. These techniques are not mutually exclusive. They can be used alone but are probably more effective when used in combination with each other (Warner 1971). In Warner's study the three specific mechanisms favored most were citizen advisory boards, informal contacts, and public hearings. Willeke mentions that besides helping the implementation process, plans were *better* because of citizen participation. Disputes could be brought out into the open before crucial decisions were made. "More and better information was used and impacts were better assessed" (Willeke 1974). Residents actually received the benefits they were intended to get.

North Carolina has provisions for citizen participation in its Coastal Area Management Act of 1974. CAMA establishes the Coastal Resources Commission (CRC) which sets guidelines for land classification and public participation for all the counties in general, but which still allows each county to generate its own plan. One of the few things that has to go through the state agency (CRC) is a permit for a major development over 60,000 sq. ft., or 20 or more acres. As far as state and local relations go, about 60 percent of the Coastal Resources Advisory Council is made up of representatives from coastal communities. Also, the CRC requires that 80 percent of its members be nominated by local government (Brower and Carol 1984). The Office of Coastal Management (OCM) is also involved in local planning issues. It provides communities with technical assistance and provides help in identifying problems with specific projects.

In North Carolina, citizen participation is thought of as an intrinsic part of the planning process. "The basic goal was to extend the decision making process in land use planning beyond the small number

of professional planners, government technicians, and officials who were usually involved" (North Carolina Coastal Management Program 1978). Local goals would be articulated by communities, and grassroots participation would dominate local planning. Citizen participation would no longer be just superficial; it would be the core of the planning process. This way of thinking about involvement in the coastal management process seems to be unique to North Carolina. Each community or county brings to the process its own style of citizen involvement; however, there are three components which are required by everyone. These are notification, public planning activities, and public hearings. In the late 1970s, two public participation coordinators, an information specialist and a communications specialist, were part of the staff of the Coastal Area Management program. They offered advice, education, and assistance to local participation coordinators and acted as liaisons between the state and local agencies.

Endangered views.

Why Study Visual Impact?

Quantification and qualification of aesthetic resources is not an easy task. Professionals have tried to devise methods of assessment and measurement since the beginning of the century. Although there is no consensus as to which methods to use, some have been found to be more effective than others. Methods have also been categorized into: (1) visual analysis methodologies, used by professional planners or decision makers to look at aesthetic characteristics and to predict the implications of a specific proposed change; and, (2) user analysis methodologies designed to evaluate "individual preferences for various aesthetic (visual) stimuli" (Bagley et al. 1973). Most of the methods which will be described try to incorporate a high amount of citizen input into the planning process.

Criteria and General Methodologies

In general, there are five different types of methods which can be used in a visual impact assessment. These techniques are *manual* (perspective drawings, renderings, and sketches), *photographic* (snapshots, slides, retouched [airbrushed or spliced] images, or photographs of models, sketches, etc.), *descriptive* (inventories, checklists, matrices, and narratives), *mapping* (aerial maps and geological surveys), and *computer graphics* (perspectives, profiles, and computer-generated plans (Duffey-Armstrong 1979)).

methods of assessment and measurement

The manual techniques are low cost, but their accuracy depends upon the artist's interpretation. They are time consuming and difficult to change once done, and sometimes it is difficult for the public to understand sections and elevations. Photographic techniques offer realistic reproductions, they are cost effective given a good photographer and good equipment, and they are easily interpretable by the public and decision makers. However, it takes time and expertise to retouch photos or slides, and it is hard to cover a large expanse of land. Descriptive techniques produce information which is compatible with the format of other environmental characteristics, but they have a limited impact on decision makers. Furthermore, a lot of detail is lost, and public input is not at a high level. Mapping can produce a comprehensive analysis, and it is visually informative; however, data collection is labor intensive, time consuming, and costly. Finally, computer graphics can generate any view, but it is time consuming, costly, highly skilled personnel are needed, lay people and decision makers find it difficult to understand, and software is hard to analyze for built-in assumptions.

Specific Studies

Some of the specific studies that follow have actually been carried out; others are suggested frameworks for studies. The first methodology was developed by Battelle Pacific Northwest Labora-

tories (Battelle 1974) as part of the Environmental Evaluation System (EES). The system includes a number of steps: an inventory of scarce visual resources, construction of viewsheds, determination of population contacts (frequency) with the views, and slide photography of each view. After slides are taken, they are presented to the public along with questionnaires. These questionnaires should be used to determine the subject's immediate response to the qualities of intactness, vividness, and unity. Finally, a questionnaire analysis should be performed. In another part of the system, environmental impacts are divided into four categories: ecology, environmental pollution, aesthetics, and human interest. "Parameter importance units" are assigned (1000 PIUs distributed over 78 parameters as a weighting system). A "value function" is assigned to each parameter, and an environmental quality index (EQI) ranging from 0-1 is formed. Finally, environmental impact units (EIUs) with and without the proposed project are generated (EIU = PIU x EQI). Red flags are put on especially sensitive areas, and then the information is evaluated.

photographic techniques

The use of PIUs seems somewhat arbitrary. They are not based on established reference points, public participation ranges from minimal to none at all, and the results seem difficult to use and therefore have minimal impact. The study does, however, cover a wide range of attributes.

Roy Mann Associates prepared an analysis of the Long Island Sound in the early 1970s. Mann's technique starts by defining a scenic resource base. Factors which he employs are absence of urban modification, topographic rhythm, and vegetation texture. The next step is to ascribe scenic value to the man-made landscape base. Lastly, a regional viewshed (horizon line) was delineated for the Long Island Sound coasts. Mann stated that "delineation of the regional viewshed permitted an identification of scenic resource within it as being of greater importance to the coastal zone than resources beyond it" (Mann 1975). A whole range of townscape types is specified, and levels of importance are determined for each of several categories: view importance, general site controls, architectural controls, and vegetation management. A shorescape analysis is then conducted on each geographical area specified. The analysis takes into account things like shore complexity, shore dynamics, uniqueness, endangerment, absence of detractions, and sensitivity to change. Finally, assets and deficits are defined and management recommendations are made for areas of special scenic concern.

defining a scenic resource base

Mann's technique involves the public, is easily communicated, and has a definite impact on decision makers. Results are clear and the technique can be easily reproduced. The study is not based on well-grounded theory, and the impacts are not measured against established reference points. The graphics add a great deal to this study.

Steinitz, in his study, uses a computer model to conduct visual impact assessments. Users (citizens) provide information on which views should be analyzed. Three data files are then created using the computer. First is a file of visual topography. This can reflect changes over time for a proposed project, or it can produce new view origins. The second data file consists of dominant visual characteristics. Two hundred and sixty-seven land uses and land types are assigned to near, medium, and far distances in the landscape. The final data file is the distance-preference evaluation. This is a five-level rating system which revolves around the distance zones. So each visual characteristic from above can have three ratings. The scale is a likert-type, from most positive to most negative. The data for this file is collected through photographic-interview field studies. The computer program records user-specified analyses as it processes the searches from each cell in the data file. The output from the files are (1) what is seen from each viewpoint, (2) how frequently a place is seen, (3) visually preferred cells and (4) a summary of visual quality. Computer use and analysis requires highly trained personnel, and it can be a big expense if an office does not have the right equipment. The technique does involve the public though, and it can produce accurate results which, if they are explained correctly, can make an impact on decision makers.

Another study which employs both citizens and professionals is Ervin Zube's ranking system. The system begins with a landscape inventory using visual indicators. This portion is conducted by professional planners or landscape architects. Next is the identification of visual and cultural qualities (perceived landscapes and the degree to which visual stimulation and satisfaction are maximized). The third step involves definition of needs and assessment of the general order of magnitude for needs of both changeable and permanent features in the landscape. Devices to bridge the gap between resources and needs are explored. Then, resources are evaluated for contrast, spatial sequence, and water variables. Finally, the needs are listed. Analysis is then conducted on how well each landscape feature fulfills the needs. One positive feature of this study

is that evaluations are the products of both users and professional inventories. Overall, Zube's methodology meets the criteria satisfactorily.

Rabinowitz and Coughlin, in their widely cited study, demonstrated that photographs could represent actual field experiences. They accomplished this by comparing results of descriptions and questionnaires for field observers and for photograph observers. This landmark finding validated the use of photographs (even black and white photographs) as a substitute for taking people out in the field to obtain their descriptions and opinions. As a result of this, future studies have gone on to employ black and white photographs.

Another part of the study tested the agreement among judges on their valuation of the landscape. Dominant features were identified. Then a matrix containing variables was constructed, and variables were rated on a five-point scale. Coughlin and Rabinowitz then determined what the preferences were for individual features. Lastly, comments from the narratives and the questionnaires were analyzed for repetition of similar descriptions. Judges do seem to have some degree of agreement among themselves. Positive statements brought about much more consensus then negative statements. The authors agree that the results may be biased due to the selection of photographs which were employed. The study involves the public a great deal and also establishes that black and white photographs can substitute for actual physical presence in the field.

A seminal work in the field of visual impact and landscape assessment is R. Burton Litton's classification system. The system starts with an information base, and the classification is divided into three categories: the landscape unit, setting unit, and waterscape unit. A field reconnaissance is done on the appropriate geographic area, and three criteria are used in judging landscapes. These criteria are unity, variety, and vividness. Then Litton does a classification of man-made elements and improvements. The evaluative terms which are employed in this study to describe landscapes are unifying, focal, enclosing, organizing, and modifying/enhancing. One unique feature of this report is the user preference studies. They take into account the observer's state of mind, the context of the observation, and the environmental stimulus itself. Finally, the study classifies aesthetic experiences and basic responses of the user-observer.

The next method by Tridib Banerjee is an excellent collection of techniques and tools for studying shorelines. The book is organized into four sections: two on inventories (public transcripts and field reconnaissance); one on getting people involved; and finally, on the development of design policies. Inventorying can be accomplished with the use of many types of maps, including U.S. Geological Survey maps, LANDSAT maps, orthophotoquad maps, zoning maps, and aerial photographs. Field reconnaissance is another method of inventorying. This can be done through cinematography, environmental simulation, photo sequences, and panoramic photography. Planners can get people involved through asking them to draw cognitive maps of their neighborhoods and by obtaining values through audience response machines. Impacts of new development can be shown through retouched photographs and renderings. Banerjee also presents brief case studies which illustrate the synthesis of data into public policy and implementation. The book is presented in an easily readable format and provides a basic framework for visual analysis of coastlines. Of special importance in this study is the public involvement and the amount of attention paid to integration of results into public policy. The technique, however, is not low cost since it employs a specially equipped theater (audience response machine).

inventorying with maps

Another study dealing with the audience response machine (ARM) is the one by Kopka (1979). In the title of her article, Kopka asks, "People, Planners and Policy: Is There an Interface?" She proceeds to give a positive response to that question. Ten years after NEPA (1969), opinions still vary as to the environmental issues. At the outset, Kopka states that this study is nothing more than a pilot and that the results cannot be generalized. The audience response machine was studied as a specific tool for obtaining environmental evaluations. Kopka employed the machine a little differently than Banerjee. She wanted to obtain subjective responses to visual stimuli using a videotape of the environment rather than still photographs/slides. Subjects would sit in a specially equipped theatre with recording consoles on the back of each chair. The subjects would record their reactions to the videotape, and a computer printout would be produced. After use of the ARM, Kopka adminsitered a questionnaire to obtain demographic data and to test the ability to recall visual and audio aspects of the film. The results were analyzed in three categories: like/dislike, aesthetic/unaesthetic, and exciting/unexciting. An item analysis, statistical analysis, and cross-tabulation were

a videotape of the environment

Coastal development pattern.

done and then presented graphically. Though there are still problems in this study, movement of the environment and sounds in the environment were directly addressed. Like the previous study, the cost is high for the ARM.

simulating recreational environments

Peterson and Neumann (in Bagley et al. 1973) used a model of individual preferences and interpersonal differences, but instead of using video–tape they simulated recreational environments in 8″ x 10″ black and white photographs. They asked 200 beach-goers which variables in the photographs influenced their satisfaction. Descriptors were used to identify the variables. Subjects were asked to rate their preference for each scene using a scale of 1 to 100. Peterson and Neumann also employed a semantic differential (using adjectives on a polar scale, for example, happy-sad, black-white). People were then grouped by preference using a method of a nominal taxonomy. Variations in preferences formed a continuum; the researchers attempted to correlate differences in preference with social, economic, and cultural status, as well as with personality characteristics of the members of each preference group. Many reviewers, for instance Bagley et al., believe this is a well-rounded study. It is easy to employ, and the users (citizens) are completely involved in the process. Retouched slides could be substituted for the photographed simulations. However, semantic differential and ratings must be subjected to reliability tests before actual use in the study.

A slightly different variation of Peterson and Neumann's study is one conducted by Jackson (1972). His main question is how variables and factors contribute to user preference. Jackson employed 35mm color slides of three different types of landscapes. He asked subjects to rate the landscapes numerically and to provide descriptions of the landscapes on a questionnaire which was handed out after the slides were shown. The SPSS (Statistical Package for Social Sciences) computer program was then used to tabulate the results. The slides either did or did not contain the three distance zones (near, middle, and far), and were either representative of the area inventoried or not. Slides were projected onto white paper, and the distance zones were delineated. Comments by subjects were written on the attractiveness of each zone, and they were also asked which distance zone they preferred (near, middle, or far). The researchers did a paired comparison of the slides, and subjects ranked the slides from most to least preferred. Overall preference was determined by totaling the number of times either a slide or a pair of slides was chosen, and a Spearman rank correlation was performed on the data. The results of the study were clear and consistent and could be easily communicated, but the study did not address a wide range of aesthetic attributes and did not include a wide range of groups.

Another method worth mentioning is Ron Boster's Scenic Beauty Estimator (SBE). Boster used

this method to study forest landscapes, but it is possible to transfer this method to the study of coastlines. Boster begins with randomly sampled color slides in a randomized order. Three groups (special interest, professionals, and users) judge each slide stimulus on a scale of 1 to 10. SBEs are standardized scores which are developed from the readings. Using a special scenic beauty estimator program, a computer can generate SBEs for the target landscapes. Another part of this method is the aesthetic response model, which is a predictive technique using feature analysis. The third part of the system is what Boster calls aesthetic mapping. The scenic beauty estimator method is modified to give scores having zero as the mean. Then an aesthetic "contour map" is produced from these transformed ratings. Values on a contour are what can be seen from that line. This map can be used in association with other maps such as soils and vegetation maps. Boster, besides providing a unique method for scenic evaluation, also provides a helpful chart of different kinds of measurements. He divides these into professional methods and public involvement, and still further into quantitative and verbal. He summarizes the different categories of scenic measures in a handy chart.

Berry's discussion of visual resource measures centers around an economic model. He makes the same assumptions about rationality and knowledge that the economic theory of the consumer expounds. The framework which Berry uses is verbal in nature. He asks subjects to describe features of the landscape and to enhance these descriptions through the use of modifiers. Ubiquity or uniqueness of features are determined, and concordant and discordant images are identified. Berry used a household questionnaire as the vehicle for obtaining his data. The survey also contained a semantic differential portion and questions about use (function) versus aesthetic values. People find it very difficult to separate whether they like a place because it is functional or because it is aesthetically pleasing. Berry tried to get at the cognitive processes of aesthetics. These are good concepts to keep in mind when doing a visual impact assessment. Berry's framework is theoretically sound, covers a wide range of attributes, and involves the public.

Another of these questionnaire studies with a twist is Richard Smardon's assessment of visual and cultural resources of coastal and inland wetlands. He proposes a system of analysis which includes seven steps. The first step is to obtain physical landscape descriptions. The second step is to determine landscape-viewer sensitivity of visual access, and the third step is to establish visibility access. Fourth is the determination of key viewpoints. The fifth step is to introduce the impacting activity and to do a land use characterization. The next step is to do the actual visual impact assessment and a mitigation summary. The visual impact assessment includes three parts. After a photograph of the target area is taken, the development project is painted onto an acetate and laid over the picture. Then, a questionnaire concerning demographic data and reactions to the overlays is given to the audience. A discussion about the development project, simulations, and impacts is then undertaken between the professionals and the public. This overall system is a good way of getting the public involved in the planning process. It obtains information about user preferences by establishing key viewpoints, and it also provides a way of testing the impacts of actual projects. The techniques are easy to perform, comprehensible by both professionals and the public, and cost-effective.

evaluations

Three studies discuss the use of models and modelscape photography as aids in conducting visual impact assessments. In chapter 13 of his book *Environmental Planning and Decision Making*, Ortolano discusses the uses of the Berkeley Environmental Simulation Laboratory. He divides the chapter into four sections: landscape preference research, preparation of visual inventories, techniques for simulating post-project conditions, and evaluating visual effects and landscape quality. Ortolano describes the use of the Simulation Lab for a project in San Francisco. A model was built for the proposed "Great Highway" along the Pacific Ocean. Then a film simulating a drive along the highway was made. Also, sequential slides of roadway views were shot and shown to the public. This method provided an opportunity for citizens and design professionals to discuss the project's impacts.

Along the same lines, Ady, Gray, and Jones developed a system for studying visual impacts using modelscope photography as one of the components. Two other techniques included in the process are hand-drawn perspective overlays and air brushing the simulated project onto enlarged photographs. Visual resources are tabulated before and after the project. Visual change is measured on a scale ranging from very low to very high, and major changes are noted. The same process is done on visual character. The viewer response portion of the system

includes questions on viewer sensitivity, awareness, expectation, and visibility of the alteration. Finally, visual quality is measured using Litton's criteria of vividness, unity, and intactness. Each are measured on a scale of 1 to 7. Visual quality equals the sum of the three ratings divided by three. Scores are taken before and after the simulation and then analyzed for differences.

California's Coastal Zone Regulations

In the last of the modelscope studies, Wohlwill asks what attributes of the coast account for its great attraction to the human species. California's Coastal Zone Regulations recognize the state's right to restrict development of the coastal strip (even private lands). Wohlwill quotes part of the *California Coastal Plan* which gives considerable attention to the visual aesthetics question. One line from the quote seems particularly important:

> development shall be either visually compatible with the character of the surrounding attractive area or shall enhance the quality of areas that have been degraded by existing development.

He considers the concepts discussed in the plan as basic to understanding environmental aesthetics. Man-made development in the coastal zone is discussed in terms of congruity (sense of fittingness, relatedness, and harmony). Wohlwill then goes on to explain his use of the Berkeley Simulation Lab to simulate various types of developments in either scenic, plain developed, or plain undeveloped landscapes.

Use of models and modelscope photography is becoming a more common practice. Though it is still expensive to use and there are not many machines around, it gives the most accurate portrait of the environment. It makes communication between design professionals, planners, and the public extremely easy.

computerized perspectives

The final two studies to be explored are both the products of government agencies. The first was developed by the United States Department of Transportation (U.S.D.O.T.). Visual resources are identified by viewers through a questionnaire for visual assessment. It gives an initial idea of a project's impacts through questions concerning project characteristics, significant visual resource issues, and other viewer response issues. Existing conditions are documented through photographs, slides, and sketches. The proposed project is then either etched on the slide, painted on the photograph, or drawn as a sketch. Alternatively, a photomontage or computerized perspective is done. Audience response is then obtained through questionnaires. Though the study is directed toward highway impact, the technique can be extended to other environments. It is not based on specific theory, and impacts are not measured against established references. The technique, however, has the following advantages: it is low cost, not very time consuming, and it gets its point across.

The second system for visual resource management was developed by the Bureau of Land Management. An inventory is conducted using three criteria: scenic quality, sensitivity level, and distance zones. Under scenic quality seven factors are identified, and then a class (A,B, or C) is assigned to the landscape. Sensitivity consists of either ratings by users or public reaction and user volume (high, medium, or low). The zones are described as fore, mid, or background, and each zone's effect upon the view and on the observer is determined. Management classes are assigned, and then overlay maps of the first three techniques are combined with the management class. A contrast rating (allowable contrast for each management level) is determined beforehand, and the overlay maps are analyzed using this criteria. Finally, a land use planning review and environmental assessment are done. Public input is obtained through the use of simulation techniques (computer, photographic, and manual). The technique is time consuming but well worth it. Visual resource management is integrated into an entire system of land use/environmental planning. The system is easily understood, and the graphics provide usable results as well.

Conclusion

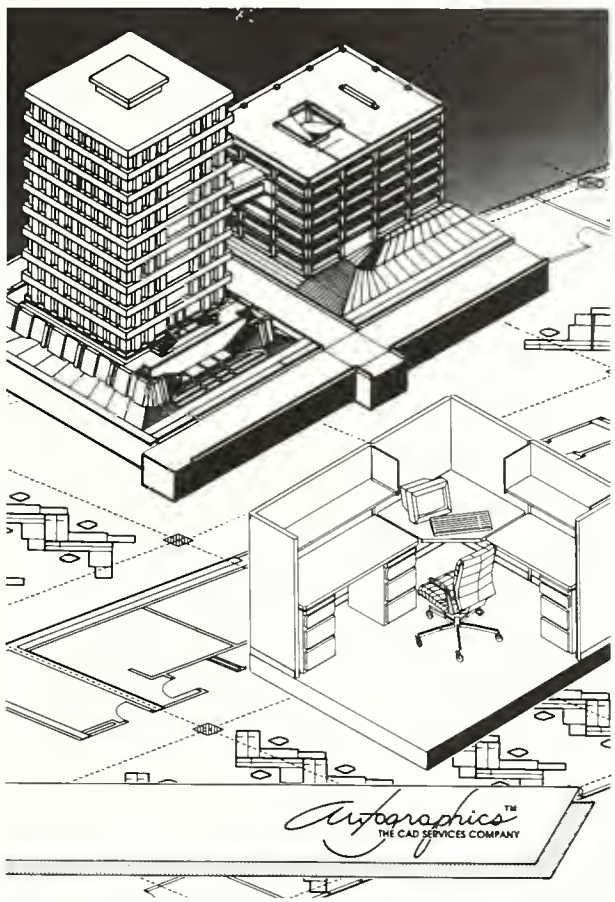
The last two types of methodologies (modelscope photography and the federal management systems), along with Smardon's study, seem to be the best for North Carolina's coastal communities. Although the initial cost of building a model is relatively high, the model can be used repeatedly. When developers submit proposals, communities can request that they also submit a model at the same scale as the community model. Communities can then look at their model with and without the proposed development. Systems like the ones Smardon, Banerjee, Ady et al., and the Bureau of Land Management developed, combine assessment of actual projects with evaluation of existing conditions and user preference. All three of these concepts have to be taken into account

when communities define their values and goals for the future. If communities can develop a step-by-step process of visual impact assessment and define their goals at the outset, they should not have disagreements later on as to what is supposed to be accomplished. Of course, individual projects will raise questions that may not have been considered, but with the groundwork already laid it should be easier to address the specifics. The main task is to inventory resources (staff, time, equipment, etc.), and to put them to the best possible use for the community.

The studies included in this report have policy implications. This is what Kaiser calls the decision rules and the plans; these lead to action instruments. These instruments include public investment, regulatory instruments, and incentive/disincentive programs (Kaiser 1971). Visual impact assessments can be made an intrinsic part of the development process. Values can be incorporated in ordinances, regulations, and design review procedures. Having a process means having a way of achieving stated goals.

The only problem with the systems is the public participation aspect. The systems do include an involvement component; however, the problem is getting the citizens to participate. Education about planning and planning issues has to start early. Citizens gradually have to be introduced to the idea of using visual impact assessments as a planning tool. This can be accomplished by using some of the mechanisms described earlier. Getzels and Thurow suggest writing a regular newspaper column about local planning issues. This is an easy, fast way of reaching a wide audience. School educational programs are also effective ways of disseminating information.

In formulating a land use guidance system, one must not lose sight of the concepts of citizen participation, component studies (like the visual impact assessment), and the idea of how everything fits together. Federal legislation, while not mandating the drafting of coastal management plans, does give consideration to the visual environment and in many cases has been the impetus for states to adopt coastal regulations. North Carolina's progressive policies have allowed counties and communities to be active participants in the coastal planning process. Visual impact assessments should become part of this process because the aesthetic environment is a vital part of what North Carolina has to offer its citizens and to its visitors. With the careful selection and administration of one of the methodologies discussed in this report, coastal communities can preserve and enhance what they are proud of. The North Carolina program helps "to identify and formulate a balanced approach to managing our precious coastal resources" (Hunt, Jr. 1978). This guidance system has proven effective so far, and with new research on natural disaster mitigation and visual impact mitigation, the system can work effectively to protect an endangered natural resource, our coastline. □



Computer aided design techniques.

Out of the Closet and Onto the Coast: Aesthetic Zoning as Visual Resource Management

David J.L. Blatt

The North Carolina Supreme Court has recently endorsed the view that aesthetics alone is a proper basis for the exercise of police power in coastal communities. Still, if certain regulatory precautions are not taken, it is possible that important scenic resources will remain unprotected. This investigation provides a theoretical defense for broadening and systematizing the application of aesthetic zoning techniques.

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The North Carolina coast is a special place. Its distinctive regional character is a source of pride and identity for local residents and for the entire state. The coast contains unique economic, cultural, historic, environmental, and recreational resources of tremendous value, and these values have received legislative recognition under the Coastal Area Management Act of 1974. However, CAMA's two-pronged approach of state supervision of local land use plans, with designation of Areas of Environmental Concern for direct state regulation, could allow some important coastal values to fall through the regulatory cracks.

For coastal residents and others concerned with protecting the unique scenic resources of the coast, two very different disciplines offer guidance: the legal doctrines of aesthetic zoning, and the visual resource and analysis techniques of the landscape architecture and environmental design professions. Aesthetic zoning concepts, paradigmatically applied to restrict junkyards and billboards, have a long and well-recognized pedigree, and the North Carolina Supreme Court has recently endorsed the majority view that aesthetics alone is a proper basis for the exercise of the police power. Though aesthetic zoning is now established legal doctrine in North Carolina as in most other places, it remains problematic, undermined by the lack of a consistent theoretical foundation.

Visual resource management and landscape analysis, by contrast, are long on theory but short on operationalization and implementation. Many studies have attempted to design inventory and classification systems for scenic resources, to create indices of visual quality, and to discern public preferences for different types of landscapes. None of the classification systems or visual assessment methods have gained universal acceptance, but the essential concept of treating scenic landscapes as visual public resources can serve as the missing foundation for a systematic application of aesthetic zoning techniques.

The Aesthetic Zoning Concept

Though aesthetic zoning is now out of the closet in North Carolina and accepted in principle by most state courts, it may not yet be out of the woods. Legal commentators have continued to criticize the theoretical foundations of aesthetic zoning, sometimes for the same reasons raised by the early courts: the incoherence of aesthetics as a substantive due process goal of the police power, the subjectivity and lack of procedural due process in regulatory standards, and potential conflicts with First Amendment rights of free expression.[1]

Though "aesthetics" is recognized as a valid regulatory objective, caselaw merely states, but does not satisfactorily explain, the public's substantive

due process interest in beauty. "Proponents of aesthetic zoning have difficulty defining the precise nature of the interest they are protecting and the evil they are seeking to address. Lacking such a definition they have tended to defend aesthetic zoning ordinances on the grounds that aesthetic regulations help preserve property values, promote tourism, and prevent destruction of interesting neighborhoods, historic sites, and scenic areas."[2] The elusive nature of the harm aesthetic zoning aimed to put right was a major reason why aesthetics had difficulty establishing its constitutionality in the first place.[3] Unlike the physical, tangible nuisances and externalities which originally justified zoning regulation, visually unattractive development has no palpable ill effect on the community, but is solely a matter of perception (social or individual). Consequently, aesthetic zoning advocates must fall back on arguments that aesthetic surroundings, like art, are valuable for their own sake and need no corollary justification.[4]

Courts seem to implicitly accept assertions that aesthetic regulation has a positive effect on the general welfare, thus begging the question of how legislatures can define the public interest in aesthetics and how far the police power can go in regulating visual appearance. An easy answer is that the public aesthetic interest might be supplied simply by the preferences of the public, as enacted by the legislature—a sort of "reasonable man" standard of community aesthetic consensus. Junkyards and billboards are the best examples, since everyone but their owners finds them distasteful, but serious questions arise when there is not a substantial degree of social consensus.[5]

A more compelling justification for regulating the visual environment has been suggested by Professor John Costonis, who explains at length that aesthetic zoning (like historic preservation) is not really aesthetic at all.[6] The traditional approach to aesthetic zoning, which he terms the "visual beauty" rationale, is bankrupt as a constitutional justification for visual regulation. Costonis instead suggests hat aesthetic regulation is often implicitly, and should be openly, rooted in "community stability-identity" considerations.[7] According to this theory, the features of the visual environment convey both cognitive and emotional meanings to the community, based on the functional and nonfunctional associations of the visual features.[8] "By virtue of its semiotic properties, the environment also plays a socially integrative and, hence, identity-nurturing role. . .therefore, the environment is a visual commons impregnated with meanings and associations that fulfill individual and group needs for identity confirmation."[9]

In other words, visual resources are not valuable as a source of beauty—concepts of beauty and ugliness are superfluous—but as a source of community character and values which define a home, a neighborhood, a region. Planners and environmental designers have long known that the environment affects behavior, for instance that street and building configuration can discourage crime.[10] Accordingly, billboards and junkyards do not generate hostility simply because they are ugly, or even because of their uses (functional associations), but because they convey the message (in a nonfunctional association) that the surrounding neighborhood is seedy, cheap, and unhealthy. The stability-identity rationale also explains opposition to attractive but incongruous modern architecture, and the preservation of historic but architecturally unpleasant buildings.[11]

stability-identity considerations

Furthermore, the frivolity and subjectivity arguments applied to the visual beauty form of aesthetic zoning are practically neutralized in the community identity context. Preserving community identity, character, and stability is a significant if sometimes elusive goal, pregnant with implications for individual mental well-being and community behavior patterns. Consequently, when visual resources can be identified as important to a community's character and self-image, a local government would be fully justified on substantive due process grounds in regulating to protect these visual resources. Secondly, since the visual environment by definition reflects community character and identity, there will necessarily be some consensus on what buildings, views, and landscapes ought to be preserved, though the precise elements of visual identity mix may be difficult to articulate in words or in legal classifications.[12] Consequently, it should be possible to articulate concrete regulatory standards rationally related to the goal of community identity.

visual resources as a source of community character

In practice, the visual beauty and stability-identity rationales are often commingled as alternate justifications, but community character is a distinct concept, based upon a public good rather than a nuisance/externality theory of the police power regulation. Community identity zoning seeks to conserve the visual environment as a public resource and to protect a common heritage, rather than to restrict the unpleasant, ugly side effects of private land use. Even by itself, the stability-identity

Waterfront view protection.

rationale is by no means purely theoretical; there are many cases in which justifications of community character and quality of life have been articulated as "corollary" to aesthetic values, so that "aesthetics" has become a surrogate for community character factors, just as property values, health and safety, and tourism were considered surrogates for aesthetic factors. If the community stability-identity rationale is a valid justification for the exercise of the police power when disguised behind the visual beauty banner of aesthetic regulation, community character is more emphatically constitutional when openly proclaimed.

problems

Though the community stability-identity rationale is more logically satisfying than the visual beauty approach, Professor Costonis still sees serious problems with this form of aesthetic regulation. Defining the nature of community character as applied to individual visual features will still be difficult, and the process of definition includes risks that visual regulation will be used to advance the narrow interests of community elites or will infringe on First Amendment rights of free expression. But Costonis' analysis of aesthetic regulation does not consider how the community character and identity rationale applies to a natural landscape like the North Carolina coast. In the coastal context, the landscape architecture and design techniques of visual resource management can answer the criticisms of aesthetic zoning and provide a theoretically sound justification for regulating the visual environment in the public interest.

Visual Resource Management and Impact Assessment

The systematic study of visual and scenic resources, though enjoying many literary antecedents such as Thoreau and Aldo Leopold,[13] began to take shape with the growth of the modern environmental movement in the 1960s. At that time, many people conceptualized the natural environment in aesthetic or amenity terms, and many environmental issues and controversies focused on preserving specific scenic landscapes. The National Environmental Policy Act of 1969 (NEPA), with its ringing resolve to "assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings,"[14] was a frequent inspiration and provided a mandate to include visual impact assessment in the environmental impact analysis process applied to managing government lands and projects.[15]

Now that environmentalism and environmental concerns have matured to focus primarily on human health, ecological sustainability, and other functional, non-amenity problems, the landscape architecture and environmental design professions have refined the techniques and concepts of visual resource management as a separate field.[16] The visual analysis disciplines have not yielded any standard method to measure or evaluate scenic beauty, though several researchers have tried. But the insights of visual resource management, like the community character/cultural stability rationale form of aesthetic zoning, are more sophisticated than a simple definition of what is beautiful and what is ugly. Instead, visual resource management provides a perspective on how to regulate a public resource—the coastal landscape—by answering important questions about the visual components of community character and identity. Broadly speaking, we can divide visual resource management methods into three categories: an inventory and classification of the visual features of a landscape, surveys of landscape perceptions and preferences among the population, and visual impact assessments of future development alternatives.

Coastal Visual Resource Regulation

Aesthetic zoning has always been concerned with regulating the privately built environment, while visual resource management is oriented to planning and management of public landscapes. Aesthetic zoning, even when explicitly directed at preserving community character and identity, has practical and

theoretical problems in describing what community character is and in isolating the visual elements which comprise it. Just as the courts which first upheld aesthetic zoning on the basis of untested "corollary justifications" of property values, tourism, and glittering generalities about community aesthetic sensibilities, modern courts which recognize the community character/identity impetus behind visual regulation must still rely on purely speculative assertions that the measure in question will actually enhance community character and identity. By using the insights of visual resource management, legislators who enact visual control measures and courts which review them no longer need make uninformed assumptions. Visual resource inventories, assessments of citizens' preferences and perceptions, and visual impact assessment provide systematic methods to identify and safeguard the particular visual features which create a community identity.

Visual resource management techniques, for their part, often seem to exist in a vacuum of purely academic interest, or in consultants' plans which are never implemented. Much work in the field has revolved around the continuing refinement of assessment, survey, and simulation techniques without following through on any concrete implementation. If visual resource management ever aspires to have a significant impact on the effect of private development on the coast or any other landscape, it must operate through the strong arm and long reach of the police power.

Granting the general usefulness of landscape analysis in police power regulation, it may appear that the real utility of visual resource management methods is in urban architectural controls and neighborhood preservation, the current frontiers of aesthetic zoning. At first blush visual resource management seems to add no dimensions to regulation of the natural environment, especially the coastal area, which already has a well-established regulatory regime. In response, this paper argues that visual resource management has a place on the coast for two basic reasons. First, specific visual regulation is necessary in areas like the North Carolina coast because the existing environmentally-oriented regulatory system is inadequate to protect specifically visual resources; secondly, it is the coast's visual resources which are the prime ingredient of the region's social, economic, and cultural values.

The first proposition means that preservation of scenic landscape resources is not necessarily subsumed under environmental protection. Of course, much environmental legislation does include an amenity-aesthetic perspective, and this thread has been woven into the fabric of coastal legislation from NEPA to the Coastal Zone Management Act. But aside from local sign ordinances and historic districts, there is no specific visual landscape regulation in the coastal area.

The basic framework of CAMA does contain provisions which might serve as the basis for scenic landscape regulation. The section defining state-regulated Areas of Environmental Concern (AEC) states that AECs may include "fragile or historic areas, and other areas containing environmental or natural resources of more than local significance, where uncontrolled or incompatible development could result in major or irreversible damage to important historic, cultural, scientific, or scenic values or natural systems."[17] However, the regulations implementing this section do not directly address "scenic values." Title 15.07H .0500 of the North Carolina Administrative Code defines Natural and Cultural Resource AECs to include coastal complex natural areas, unique coastal geologic formations, significant coastal archeological resources, and significant coastal historic architectural resources.[18] These categories might, but need not necessarily include areas of purely visual appeal; in any case, only one AEC in this category, an archeological site, has been designated.[19]

state-regulated Areas of Environmental Concern

Under the use standards for all natural/cultural AECs, no development permits may be granted unless the development is found to cause "no major or irreversible damage to the stated values of a particular resource," including, inter alia, "Development shall be consistent with the aesthetic values of a resource as identified by the local government and citizenry."[20] As the Hatteras Island study suggests, the landscape values and perceptions of locals and outsiders may differ, so it is rather bizarre that local residents should define the aesthetic values of a scenic resource which must, by statutory definition, be of extralocal significance. This peculiar contradiction indicates that little if any thought has been devoted to the systematic regulation of visual resources.

systematic study of scenic resources

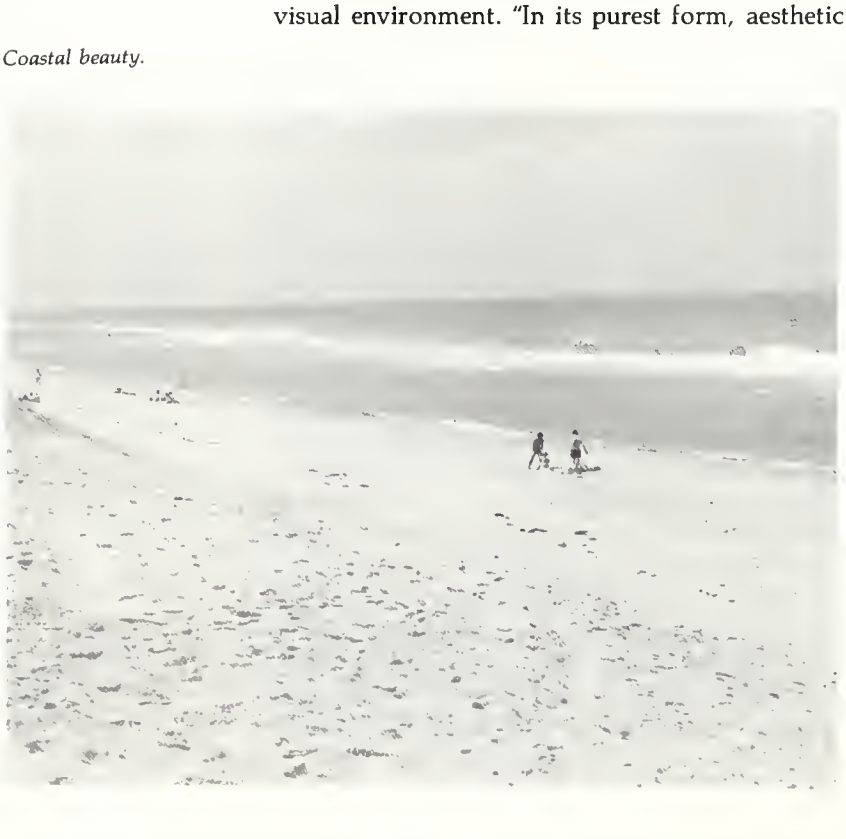
Despite the lack of regulations specifically tailored to scenic landscapes, it is also possible that CAMA's other regulatory provisions, especially those aimed at safeguarding ecological processes and at mitigating the effects of natural hazards, might have a cumulative side effect of protecting visual resources

as well. Since the scenic values of the coast are predominantly natural, a rough visual resources management strategy would simply be to prevent development in scenic areas. The policy prescriptions for several other types of AECs – to preserve the ecological integrity of wetlands, barrier islands, estuaries, and beach systems, or to protect life and property in natural hazard areas, for instance – also involve restricting development. Consequently, coastal visual resources might be protected as an unintended "corollary benefit" of preserving a natural site for non-visual reasons.

Separate treatment for visual regulation is necessary for two reasons. First, environmental features which serve important ecological functions may not be perceived as aesthetically or visually appealing. Wetlands, with their pleasing environmental connotations of diversity and fertility, were formerly described as swamps, with rather different connotations. In Zube and McLaughlin's study of the attitudes of Virgin Islanders, the residents' perceptions of what was beautiful generally reflected environmental resources of ecological value, with the notable exceptions of salt ponds, which were seen as ugly yet fulfilled important wildlife habitat functions.[21]

Conversely, and more importantly, ecological factors do not completely dictate the appearance of the visual environment. "In its purest form, aesthetic regulation is called into being by the nonfunctional association of resources. . .Nonaesthetic land use and environmental regulation in its purest form deals with a resource's functions and its functional associations."[22] The functional preservation of natural systems for habitat preservation, ecological protection, or hazard mitigation can set outer bounds on the quantity or level of coastal development, but only visual impact regulation can affect the form, visual quality, and appearance of development. Environmental regulations aimed at the functions of ecosystems will not do the whole job. If a site's carrying capacity can support a certain intensity of development in terms of dwelling units per acre or number of recreational visits, any environmental controls on the functional associations of development will not affect the shape and placement of buildings, the obstruction of views, the architectural congruity of the buildings with their surroundings, or the screening of intrusive and objectionable elements.

Coastal beauty.



Both visual and ecological aspects of the coastal environment deserve to be considered on their own merits, and unless the separate importance of visual resources to community character and identity is recognized, it may well undercut the political and legal status of environmental protection. For many years environmentalism labored under the burden of its early association with nonfunctional, outdoorsy aesthetic and amenity perspectives, but it is now widely recognized that environmental issues are far from being luxuries. They concern essential, functional natural systems which provide life-support services. If coastal advocates and residents cannot articulate a legal rationale for opposing development which would be visually intrusive, impair their sense of community, and dilute their cultural identity, they may have no alternative but to distort functional ecologically-oriented regulations in order to find a cognizable legal basis for their position.[23]

People should be able to justify protecting the visual character of the coast directly, without resorting to disingenuous arguments about storm hazards or fragile ecosystems, thereby devaluing the hard-won gains of environmental regulation. Such a subterfuge would be reminiscent of the early days of aesthetic zoning, when billboards were cited as depreciating property values, impairing traffic safety, and encouraging vice and vagrancy simply to justify legal protections of the visual integrity of neighborhoods.

A visual regulatory approach is needed for the North Carolina coast because the nonfunctional associations of coastal visual resources are actually more important than functional associations to many people. The average North Carolinian, unless a fisherman, sailor, or marine biologist, is unlikely to mention biological productivity or water systems management when speaking of the coast. Instead, the identity and character of the coast—save for the sound, smell, and recreational possibilities of the ocean—reside in the vistas of unbroken horizons, of dunes and shores showing the ceaseless energy and dramatic contrast of the boundary between land and water. The imprint of man on the coast, too, reflects the presence of the sea. Fishing villages, piers, lighthouses, docks, and boardwalks, also signify the visual identity of the coast. It is because we see these things that we think of the coast as a distinct and special region, and a place where people go to escape the constrictions of their daily lives against the background of endless sea and sky.

It is obvious that views of the ocean, sounds, beaches, and dunes are major tourist attractions and economic resources. Beachfront hotel rooms, cottages, and condominiums command premium prices, while towns with charming and historic waterfronts are tourist meccas. Moreover, the economic value of non-visual resources—recreational facilities, restaurants and hotels, fishing piers, bathing and surfing beaches—is considerably enhanced by the overall scenic character of the surrounding landscape. It is the way the landscape looks that draws people to the coast and creates its distinctive milieu, and it is the definable visual resources of this environment which should be protected through visual impact regulation.

Once we accept that specifically visual regulation has a place on the coast, the next issue is why it should take the form of police power zoning instead of its traditional applications in planning and the management of government properties and projects. Simply put, if the coastal visual environment is to be protected, regulation is essential. State and local governments can influence development patterns in many ways, but they can only influence development's appearance through visual regulation or publicly-owned projects. Aside from existing state and federal parklands, where the natural landscape is largely preserved, the public sector on the North Carolina coast does not dominate the landscape as the federal government does in many western states where many visual resource management techniques have been applied.[24] Instead, the danger to coastal community character and identity comes from private-sector development pressures, which will continue to be considerable even under the CAMA regulatory constraints. Police power regulation, or some form of aesthetic zoning, is the only possible means to control the visual form of private development on a community-wide scale. Thus, the regulatory challenge is to integrate new development into the existing visual environment of the coast without adulterating the special qualities that attracted development in the first place.

visual resource management

Coastal visual resource management should use the police power also because visual impact regulation now has a solid legal foundation. The statutory mandate of CAMA, combined with the North Carolina aesthetic zoning caselaw, furnishes the ingredients which can be assembled into a coherent rationale for regulating the visual resources of coastal communities. The first place to start for developing visual impact regulation is not the aesthetic zoning landmark of **State v. Jones**, however, but the historic preservation approach of **A-S-P Associates**.

Jones, which established a flexible, case-by-case balancing test to determine the validity of aesthetic zoning, is unfortunately an example of the confused "visual beauty" approach, with all the lurking problems of deciding why and how to regulate the beautiful. For instance, the **Jones** opinion expressed approval of cases in other jurisdictions which treated junkyard regulation as a matter of beauty vs. ugliness, based on "modern societal aesthetic considerations such as concern for environmental protection, control of pollution, and prevention of unsightliness."[25] By contrast, the "preservation of the character and integrity of the community, and promotion of the comfort, happiness, and emotional stability of area residents," were only "corollary benefits."[26]

By retaining the traditional conception of visual regulation as a matter of aesthetic sensibility and civic beauty, **Jones** fundamentally misconstrues the nature of visual impact regulation. Though its result represents the modern majority rule, **Jones**'s rationale is exactly backwards. Community character and identity are the real raisons d'être of visual regulation, while "aesthetics" in terms of beauty and ugliness is a misleading surrogate. Junkyards are not restricted because they are ugly or even functionally harmful, but because the semiotic values of their nonfunctional associations are negative—they make people feel bad about their neighborhood. The same

motivations are at work in restrictions on mobile homes, billboards, and other common targets of aesthetic zoning.

historic preservation

Visual resource regulation in North Carolina finds a better analogy in the historic district statute in A-S-P Associates, which presents a systematic justification for controlling the appearance of development. In A-S-P, substantive due process was satisfied by accepting the "educational, cultural, and economic values" of community stability and identity as proper goals of the police power.[27] Procedural due process was satisfied by the application of definite, recognized exterior appearance standards by an expert review board; the ordinance did not try to define beauty or impose an abstract aesthetic standard, but regulated visual appearance by reference to the existing visual context. Because the historic district regulations were only concerned with exterior visual appearance, and established a standard of congruity with identifiable elements of the recognized Victorian style, the ordinance was found rationally related to the approved goal.[28]

The historic district analogy may already be applied in a less-than-historic context, with special appearance controls aimed at preserving the visual character of a community.[29] Statutory support can be found in N.C.G.S. 160A-451 et seq., which allows counties and municipalities to create advisory appearance commissions "to promote programs of general community beautification" and make plans and studies of the visual resources of the community.[30] Chapel Hill has taken a lead role in exploiting the quasi-historic visual regulation approach, having employed restrictive appearance districts, sign ordinances, and entranceway plans to preserve its much-ballyhooed "Village Atmosphere" in the face of strong growth pressures. In places like Chapel Hill, the semiotics of the visual environment are a major part of the local quality of life, and comprise the essence of community identity.

applying the model to the coast

The historic district model, with community identity as its goal and definable contextual standards as means, applies **a fortiori** to the coast, where the natural character of the visual environment helps stifle the standard criticisms of aesthetic zoning. In terms of substantive due process, the context of coastal landscapes threatened by development defines both the need for police power visual regulation and the objectives of that regulation. The natural visual resources of the coastal area are universally appreciated and represent a basic consensus about identity-creating resources which should be protected. Since nature is the guide, potential charges of exclusivity and imposing elite aesthetic sensibilities, such as are sometimes leveled against Chapel Hill, will be defused. Moreover, governments will not have a carte blanche to enact any form of architectural control or development restriction in the name of preserving the visual identity of the coast. Nor can they retain arbitrary, standardless discretion to decide what forms of development are or are not consistent with the coastal character. Instead, visual resource management techniques create a rational nexus between community identity ends and police power means by explicating the links between specific landscape features and the resulting sense of place. Viewsheds and vistas of sea and shore serve as natural referents from which objective regulatory standards can be derived.

First Amendment problems are also alleviated because the coastal landscape is a pre-existing public resource, a "visual commons," not a forum for individual architectural expression. The visual forms of the urban built environment can arguably be considered a sort of architectural Speakers' Corner in which individual expression combines to create a community character. The value and character of the coastal landscape, by contrast, is predominantly natural. These landscape attributes comprise a public good which can be infinitely and indefinitely shared by viewers, but which is "consumed" by intrusive or incompatible development. Too many buildings trying to take advantage of ocean views can destroy the landscape for all—a true Tragedy of the Commons situation. Consequently, to the extent that building design and the visual form of development are protected expression at all, the non-speech aspects of coastal development far outweigh the First Amendment interests at stake.[31] Finally, the hackneyed "corollary benefits" of visual regulation—preserving property values and promoting tourism—are undeniably genuine in the coastal context, where the visual appeal of the landscape is the mainstay of the entire local economy.

The legal institutions which might be created to implement coastal visual controls depend on how the inventory classifies landscape resources, whether it emphasizes uniqueness or typicality. From a statewide perspective, almost all of the coastal landscape is unique, but in the context of the coastal region alone, much smaller and more discrete areas stand out as "of greater than local significance." Consequently, coastal visual resource management be-

comes a state versus local issue. On one hand, local government and residents have the most intimate knowledge and the largest stake in the identity- and character-creating features of the landscapes of their own communities, and their views should be respected as provided in the CAMA regulations. On the other hand, the North Carolina coast is a state and national resource, whose regional character provides a sense of place and fulfillment to many more people than the permanent residents. Many local governments and residents may be more sympathetic to (or be the same people as) real estate interests and more willing to pursue intensive development, and their views on the visual resources of the coast may not coincide with those of other North Carolinians.[32]

The tendency of local governments to take a parochial approach to a common resource, and their lack of expertise in planning and land use, are some of the reasons why the CAMA framework was originally enacted. Because CAMA has been fairly successful in balancing state-local tensions, and increasing local governments' awareness and capacity to deal with coastal planning issues, while protecting the broader public interests in coastal resources, visual resources management should also be able to fit under the CAMA umbrella. The statute itself provides sufficient authority, even a mandate, for protecting the scenic resources of the coast, but new implementing regulations are necessary to properly construct a visual impact regulatory program.

Like other coastal policies, visual resource management can be implemented through CAMA's dual approach of state-regulated AECs and state supervision of local coastal plans. First, the Natural/Cultural AEC regulations of 15 N.C. Admin. Code .07H.0500 should be amended to include a specific scenic or visual component, creating a scenic AEC within which major and minor development would be reviewed and permitted just like any other AEC. Scenic AECs should be designated as viewsheds, identifying vistas of and from capes, inlets, and marshes of particular quality and from state and national parks, wildlife sanctuaries, and other protected lands. All of the designated viewsheds would be of extralocal significance. State-determined standards must control the designation and management of landscapes of special quality; otherwise, allowing the visual context to be determined by "local government and citizenry" would subvert the notion of preserving the landscape resource for the larger public.

The use standards for scenic AECs should generally provide that no development will be permitted which substantially impairs the visual attributes of the landscape as determined by the Office of Coastal Management at the time of designation. This textual incongruity standard is much like existing AEC use standards and thus would be legally sufficient standing alone, but it could also be supplemented with quantitative measures of how many degrees of vision may be impaired, whether the development is visible from certain points, or whether visual access to the shore or other sights is compromised. For major development permit applications, OCM might require the full range of visual impact assessment techniques, such as before-and-after sketches, photos, or models, to further specify the effects of property development on particular visual resources. OCM should also develop in-house expertise in visual impact assessment, landscape evaluation, and perceptual and preference surveys in order to carry out its own scenic assessments and to give technical assistance to local governments.

visual resource management on the coast

Indeed, if coastal landscape protection is to succeed, local programs must play a vital role, just as with the other policies of CAMA. The coastal landscape is simply too vast for the state to regulate alone, and the proper state role in any case should be limited to those visual features which are of more than local significance. Moreover, as evidenced by waterfront historic districts and sign ordinances, many coastal communities seem quite willing to take regulatory steps to protect the visual symbols of character and identity. To spur further action, CAMA's local planning regulations at 15 N.C. Admin. Code .07B.0200 should be amended to require a visual resource management element to be included in local coastal plans. Local government authority to exercise their police powers for visual regulation comes from the result of **State v. Jones** and the rationale of **A-S-P Associates**.

organizing visual programs around the viewshed concept

Local visual programs should be based on their own landscape inventories, organized around the viewshed concept. Visual regulation ordinances could be enacted in the form of a viewshed overlay zone taken from a viewshed map and applied to points and paths of scenic significance, as identified by local residents. The precise jurisdictional boundaries of viewsheds are not as important as landscape architects think, because the regulatory requirements would be contextual performance standards and not burdensome specification requirements.

An Aesthetic Resource.

Applicants for development permits in the viewshed zone would be required to show a minimal impact on sight lines, views of dunes or beaches, forest background, or other visual features; in general, minimal visual intrusion. This can be accomplished either by scaling down buildings or clustering them with other development, or by screening fixtures with vegetation. Permit applicants should have latitude in devising methods to integrate development with the landscape, but they should also bear the burden of showing that their proposal would comply with the applicable visual standards.[33] Specifically, local visual impact regulations could include jurisdiction-wide height and bulk reductions, screening of intrusive development, underground utility lines, and architectural standards, making the entire community a protected visual resource area without having to provide a possibly disingenuous historical nexus. However, if a historic district already exists, the locality could easily integrate its visual regulations as part of the historic appearance controls. Also, beach access programs could begin to consider visual access as well as physical access to the shore.

Conclusion

As development pressures increase on the North Carolina coast, those who cherish the area will realize that the coastal landscape – its visual resources – deserves separate attention and protection if the special identity of the coastal region is to be preserved. When legislators take up this issue, they should avoid the temptation to turn to the orthodox aesthetic zoning doctrine embodied by **State v. Jones**. Instead, policymakers should realize that a pleasing appearance is not desirable for its own sake as an aesthetic experience, but because the visual environment can signify the character and identity of an area: the regulatory theory of **Costonis** and **A-S-P Associates**.

When trying to identify the nature and composition of the visual components of community character, the law should turn even farther away from its own time-worn, untested assumptions, and be guided instead by the design professions' techniques of visual resource management. Landscape inventories, perception and preference evaluations, and visual impact assessments indicate what is important in the coastal landscape, and by so doing can justify and illuminate the precise application of police power regulation to protect significant viewsheds and other ingredients of the coastal character.

Though mutually unfamiliar, law and landscape analysis can each supply the deficiencies of the other discipline. Aesthetic zoning law needs a theory to rationally determine how and where to regulate

visual resources, and visual resource management needs a concrete regulatory application in order to affect the overall appearance of private development. More importantly, joining aesthetic zoning and visual resource management would not only help preserve the priceless visual riches of the North Carolina coastal landscape, but would set an example for other places. The coast is not the only region of particular visual quality, and North Carolina is only one of many states which embraces the validity of aesthetic zoning. Visual regulation might begin to protect the character and identity of mountain ridges, river valleys, and other special places across the country, including the urban historic districts which first pointed the way. By fusing aesthetic zoning with visual resource management, North Carolina can take pride not only in a matchless coastal landscape, but also in a method of protecting it. □

NOTES

1. Costonis, supra n.2; Rowlett, supra n.6; Ziegler, supra n.7; Note, Aesthetic Regulation and the First Amendment, 3 Va. J. Nata. Res. L. 237 (1984); Note, **State v. Jones**: Aesthetic Regulation – From Junkyards to Residences? 61 N.C. L. Rev. 942 (1983).
2. Rohan, supra n.2 at 16-33-4 (citation omitted).
3. Costonis, supra n.2 at 413-8.
4. Note, Beyond the Eye of the Beholder, supra n.21 at 953.
5. Ziegler, supra n.7; Note, Aesthetic Regulation: **State v. Jones**, 14 N.C. Cent, L. Rev. 239, 246 (1984).
6. Costonis, supra n.2.
7. Another commentator, Edward Ziegler, refers to this rationale as the "derivative human values" theory. Ziegler, supra n.7; Rathkopf, **The Law of Zoning and Planning**, §14.02(6).
8. Costonis, supra n.2 at 392.
9. Costonis, supra n.2 at 418-9 (emphasis in original).
10. S. Greenberg & W. Rohe, Neighborhood Design and Crime: A Test of Two Perspectives, 50 J. Am. Planning Assn. 48 (1984).
11. Costonis, supra n.2 at 420-24.
12. At least without the visual resource management techniques discussed.
13. R. Litton, Descriptive Approaches to Landscape Analysis, in report of National Conference on Applied Techniques of Analysis and Management of the Visual Resource, Incline Village, Nevada, April 23-25, 1979, at 78-9. This conference was a significant milestone in the development of the visual resource management field. R. Smardon & J. Felleman, The Quiet Revolution in Visual Resource Management: A View from the Coast, 9 Coastal Zone Mgmt. J. 211, 213 (1982).
14. §101(b)(2).
15. Note, Beyond the Eye of the Beholder, supra n.2 at 1457; S. Scauman, On A Clear Day in Ogunquit, Maine, 9 Coastal Zone Mgmt. J. 313 (1982); R. Andrews, Landscape Values in Public Decisions, Report of Conference, supra n.40 at 686; K. Craik & N. Feimer, Setting Technical Standards for Visual Assessment Procedures, Report of Conference, supra n.40 at 93; L. Ortolano, **Environmental Planning and Decision Making** (New York: John Wiley & Sons 1984) at 305; E. Zube & K. Craik, Indices of Perceived Coastal Quality, 11 Coastal Zone '78 1008 (1978); E. Keller & J. Bedford, Research Design to Evaluate Scenic Resources in North Carolina, N.C. Office of State Planning (1974) at 1. 16 Smardon & Felleman, supra n.40; Ortolano, supra n.42.
16. Fischman, Visual Impact Assessment: A Review of the Methodologies and Literature as Applied to the North Carolina Coastal Zone, Center for Urban and Regional Studies, UNC-CH (Jan. 1986). This paper could hardly have been written without the assistance of Gail Fischman in making available the sources from her study. The reader is urged to consult her paper for a more detailed discussion and review of the visual resource management literature.
17. N.C.G.S. §113A-113(b)(4).
18. 15 N.C. Admin. Code §.07H.0504.
19. Telephone conversation with Robin Smith, Office of Coastal Management 8/4/86. The site is Permuda Island, designated at 15 N.C. Admin. Code §.07H.509(e).
20. 15 N.C. Admin. Code §.07H.050(1)(c).
21. Zube & McLaughlin, supra n.58 at 369-70; see also Andrews, supra n.40 at 688.
22. Costonis, supra n.2 at 429.
23. In addition, environmentalists may be wary of weakening their position by advocating protection of mostly-scenic resources. See Ris, supra n.53, at 307.
24. Andrews, supra n.40; Boster, supra n.45.
25. 305 N.C. at 529-30, 290 S.E.2d at 680.
26. 305 N.C. at 530, 290 S.E.2d at 681.
27. 298 N.C. at 216, 258 S.E.2d at 450.
28. See Note, Beyond the Eye of the Beholder, supra n.2 at 1452-6.
29. Note, Aesthetic Regulation, supra n.25 at 253-4.
30. N.C.G.S. §160A-452.
31. Alternatively, coastal landscape regulation could be seen as a content-neutral time, place, and manner regulation on a regional scale; restricting all forms of incompatible development but only within coastal viewsheds.
32. See Hegenbarth & Shaw, supra n.64.
33. It should be noted that the appearance commissions authorized by N.C.G.S. §160A-451 would probably not be able to assume the permit review functions directly, since **State v. Jones** forbids aesthetic regulation to be delegated to bodies without statutory police power authority. 305 N.C. at 351, 290 S.E.2d at 681. Consequently, the town council or other governing body might want to use a visual advisory commission, with or without professional qualifications for membership. It is unlikely that many coastal communities have any residents qualified in landscape planning and design, pointing up the need for OCM expertise and assistance.

Successful Land Use Planning for Small Towns: A Case Study of Bath, North Carolina

Terry W. Alford Dale Downes Sarah Woodworth

Many small coastal communities face the challenge of accommodating growth without pushing its high costs on residents. The Town of Bath, North Carolina is addressing its growth problems using the CAMA guidelines, state and federal funds and active citizen participation.

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Introduction

Throughout the Southeastern Atlantic Seaboard, thousands of small towns with aging populations, stagnant economies and limited financial resources are encountering increased pressure for recreational development.

The Town of Bath, North Carolina is one such place, and its experience with land use planning—prompted by a state land management act—provides a model for other towns in similar straits. Bath's experience also demonstrates the benefits that can result from partnerships among local, state and federal governments and the private sector.

North Carolina's Coastal Area Management Act

In 1974, concern about the negative impacts of unconstrained development along the North Carolina coastline prompted the North Carolina General Assembly to pass the Coastal Area Management Act (CAMA). CAMA established a comprehensive regional management program for 20 North Carolina counties. The Coastal Area Management Act is designed to accommodate both public and private interests concerning the coast. The act is intended to strike a balance between the use and preservation of coastal resources.

To insure "balanced" development, the CAMA process includes state designation and regulation of environmental areas, as well as specific guidelines for the creation and maintenance of coastal area land use plans. The Coastal Area Management Act provides a structure that guarantees particular issues are addressed in planning for future land use.

The act requires a partnership between the state and local government. Beyond the structural guidelines, a local government is responsible for establishing and maintaining a balanced growth policy. Each town must consider the opportunities and constraints associated with development. Therefore, CAMA affords local governments a great deal of autonomy in planning for future land use. The partnership results in a tailored land use plan that fulfills the needs of the local government and the greater coastal area.

Larger towns and cities of the coastal area have been able to muster resources to minimize the negative externalities associated with increased coastal development. However, smaller towns, while facing similar development pressures, have fewer resources available to fund mitigative measures. Without creative planning and professional support, small towns are often unable to expand their economic base without compromising the environment.

The director of the North Carolina Department of Coastal Area Management in the North Carolina Department of Natural Resources and Community Development highlighted the future problems in 1985:

> This program's greatest challenge in its next 10 years will be addressing these more difficult, but perhaps more important problems where the management needs are less clear and the solutions considerably more complex. One such topic is the protection of the coastal water quality. . .It will require better treatment of increasing levels of wastewater in areas where septic tanks are marginally suitable and large public treatment systems are financially beyond reach.

The CAMA structure forces local governments to address these important issues, as it dictates that a particular process be followed in creating a land use plan. This paper illustrates how vital the process itself is to accomplishing a creative and effective land use plan. To demonstrate, the experience of one small coastal town facing development pressures will be analyzed.

The Town of Bath has been successful in turning identified needs and objectives into action and results. Since the early 1980s, town leaders have worked with CAMA officials to devise ways to stretch their resources to help the municipality deal with development pressures. CAMA guidelines gave Bath a place to start in the evaluation of present and future land use. The process revealed to the Town particular needs, and the identification of the needs became objectives. Public participation, CAMA supervision, and professional assistance moved objectives to accomplishment.

Bath's land use planning does not simply lay out general land use guidelines. The Town has taken an active role in preparing for future coordinated development. With the assistance of consultants, the Town created a land use policy that regulates and accommodates inevitable development. The Bath Land Use Plan and its 1986 update set policies that regulate development. For example, the development of an alternative wastewater treatment system accommodates development yet controls negative externalities.

Bath's success demonstrates: 1) how a small town with very limited resources can devise a way to achieve something if it has vision, desire, and some help; and 2) how a local government that takes the planning process seriously can decide to implement it and make it work. The local government must be willing to the effort.

Bath's experience reveals a variety of lessons about planning for small coastal towns. The most elementary (yet often forgotten) is that the land use process

Historic Bath

serves as a vehicle for action. The extent to which a small town can take action to mitigate excess development depends mainly on the resolve of the town. With local participation, CAMA guidance and professional assistance a small coastal town can initiate measures that have a profound impact on future development.

The Town of Bath

The Town of Bath played an important role in the early history of the state. Located at the confluence of Bath Creek and Back Creek on Pamlico Sound, the town's harbor served as a port of entry to most of the state in the 1700s. It was the site of several historic events, including the state's first General Assembly and visits by the pirate Blackbeard. Blackbeard's visits are commemorated in an outdoor drama performed for tourists every summer.

The town has an estimated population of 267. After several decades of population decline, the town has been growing at an estimated 3.75 percent annually since 1980. Significantly, between 1970 and 1980 the elderly population of the town doubled from 21 percent of the total population to 42.8 percent. Tourism is the largest contributor to the economy of the town and the local high school is the single largest employer (70 employees).

Wastewater Treatment Plant

Recent growth, coupled with environmental limitations such as flood prone areas, points of excessive erosion, and limitations of soil for septic tank use, have made careful land use planning and implementation critical.

CAMA-mandated land use plan

The first CAMA-mandated land use plan for the Town of Bath was completed in 1977 in conjunction with the Beaufort County Land Use Plan. The Town of Bath Planning Board adpoted a Land Development Plan in 1977 and a companion Zoning Ordinance in 1979, which included an Historic District Ordinance. In 1980, the town decided to do its own land use plan, and in 1981 the town adopted its first locally drafted CAMA Land Use Plan. Bath is now completing its mandated 5-year update of that plan. The Town Board of Commisssioners has identified several concerns that are typical of many of its sister cities in the Southeast Atlantic Seaboard:

- how to promote farming, attract light industry, and stimulate business and local employment;
- how to continue improving the water system and treat wastewater to provide better service to townspeople and allow for future development;
- how to guide and encourage development of permanent second homes and other recreational projects in the area without harming the town's natural and historic qualities;
- how to maximize citizen involvement in the planning process.

Wastewater

Of those concerns, wastewater treatment was considered one of the most pressing. The town has historically relied solely on septic tanks. But soil drainage makes septic tanks impractical on a broad basis. By the late 1970s and early 1980s, the town was already detecting increased coliform bacteria levels in its groundwater. Although the actual source of the bacteria was unknown, the problem highlighted the limitation imposed by wastewater treatment on the town's potential for development.

In 1982, CAMA established a demonstration grant fund. Because of Bath's strongly stated commitment to protect its water, and because the town typified many small coastal towns, CAMA provided the town with demonstration project funds to hire consultants to develop an alternative wastewater treatment system.

The Town of Bath enlisted the assistance of a planning consultant to propose alternatives and to examine the potential for additional funds beyond the town's revenues. Bath had already concluded that a conventional centralized wastewater treatment plant would be too expensive (an estimated $1.2 million). So the consultant embarked on a study to develop a plan for a small, alternative wastewater system that would be easily adaptable to other coastal area communities.

Since increasing development of the town was an important issue with its citizens, and since any treatment system would entail increased taxes, the Town Board of Commissioners and the consultant agreed from the start that any planning should involve maximum communication with the public.

First, a survey was conducted. That survey indicated that half of the town's 186 septic tanks were in marginal or inadequate condition. Bath High School had occasionally been forced to close early to avoid overloading the septic tanks.

To the consultants surveying the situation, the problem required taking a larger view of Bath's future:

> The challenge of Bath, as with many small coastal communities, is to accommodate the discrepancy between individuals' inability to pay and community goals of growth and improved quality of life. The challenge for the Planning Board and its consultant is, therefore, to identify commercial development opportunities within the target area that would reduce individual residential hook-up

charges, while achieving community growth goals. That is, can new income-generating projects be developed as a means of financing a significant proportion of the total hook-up costs?

Working towards that end, in the fall of 1982 the Town and the consultants organized a public meeting to discuss growth and development possibilities. All property owners, town officials, and other key individuals were mailed invitations and the meeting was publicized in the local newspapers. Over 30 community residents attended. The consensus from the meeting was that the cost of implementing a centralized wastewater treatment system would be borne by new businesses or development, rather than by existing businesses or homeowners.

Consultants studied a variety of funding sources: Farmers Home Administration (FmHA) Community Facilities Program; federal Community Development Block Grants (CDBG); the North Carolina Clean Water Bond Act of 1977; and the CAMA Implementation Demonstration program. The consultants concluded that the most feasible options were some combination of funding from FmHA, the Clean Water Bond Act, and Town of Bath General Obligation bonds.

Since the town had a median income below the national poverty level, and since the existing treatment system was a health hazard, the town was eligible for both loans and grants from FmHA for up to 75 percent of the total project costs, excluding maintenance and hook-up costs.

During this period, engineering studies were underway to determine the most feasible treatment system. Since the FmHA required that its funds be used for a community-wide system, the engineering consultant was able to rule out the possibility of a treatment system for a selected area of the town, one of the options considered at the start of the study. Several areas were identified as being suitable for a community-wide septic field. The engineer then prepared cost analyses for several possible treatment systems.

During the course of 1983-84, the town secured several funding commitments: from the FmHA for a $217,000 loan and a $419,000 grant; from the North Carolina Division of Environmental Management for a $90,641 grant from the 1977 Clean Water Bond Act; and from the North Carolina General Assembly for a $70,000 grant. The grants and loan, however, were contingent on Bath's citizens' approving a $228,000 bond referendum scheduled for December 4, 1984.

For the bond referendum, the town officials and consultants focused on explaining to the citizens what the wastewater treatment system entailed, and the costs involved. The consultants analyzed household water usage in developing a sliding cost scale that minimized cost impact to low-income households.

Under that scale, the typical family could expect to pay about $20 per month for both water (which the Town was already providing to residents) and sewage services. A brochure detailing the system and its costs was mailed to all property owners and key individuals.

On election day, 71 percent of Bath voters turned out to pass the referendum by a 102 to 21 margin. Construction of the system started in the spring of 1986 and is to be completed in early 1987. The system is designed to accommodate the Town's doubling in size, or handle 1995 projected growth.

Coastal Bath

Lessons from Bath

Several important political and technical lessons were learned from this project:

1. Bath's success demonstrates that small towns can elicit monies from several sources to fund critical capital improvements.

2. Maximum citizen participation in the planning process can be successfully completed and implemented, and indeed probably offers better hope for success than planning conducted by technocrats behind closed doors. In Bath, citizens were provided with numerous opportunities to participate in the planning process.

Aggressive efforts to obtain citizen input are probably even more important in small towns than in large ones. Residents of small towns are more likely to be aware of what is happening in their town and to vocalize their concerns. Planners should therefore provide opportunities for open dialogue and attempt to channel citizens' suggestions towards resolving planning problems.

environmental and cultural protection

3. Bath's success shows the potential for joint state government/local government/federal government/private sector ventures, where all have a stake in the outcome.

4. Local governments covered by CAMA learn an important lesson in land use planning. For Bath, much of the information that was inherent in making a decision about wastewater treatment had already been collected and digested by citizens, so the town was comfortable going through the process of determining its direction on wastewater. Other coastal towns that have also gone through the CAMA planning process should find the experience easier each time around.

5. From a technical standpoint, the consultants examined the legal constraints of developing a wastewater system before focusing on technical issues. This expedited the process. Occasionally, there is too much of a tendency to focus on technical issues, only to find out that legal constraints make them irrelevant.

maintaining a balance

6. During the public discussion of the project, the consultants focused on both the need and demand for the system. This is an important distinction. Need was defined as existing and potential septic tank system failure. Demand was defined as the willingness of economic forces in the marketplace to allocate money for improved wastewater treatment. Drawing this distinction defines the most feasible avenues to pursue financing.

7. Finally, the experience pointed out the importance of studying the restrictions of financing sources early in the process. In the case of Bath, an earlier examination of FmHA regulations would have eliminated the necessity of considering wastewater treatment systems for limited areas of the town since the FmHA finances only community-wide programs.

Bath Land Use Update

The 5-year update of the Town's Land Use Plan is based on a household survey conducted by the Planning Board and consultants in 1986. It reflects the high priority the Town placed on public input. The citizens of Bath and its planning jurisdiction considered five issues to be of primary concern: pollution of creeks and rivers from farmland water run-off; phosphate mining operation along and within the Pamlico River; pollution of creeks and rivers by industry; protection of cultural and historical areas; and protection of commercial fishing.

The Planning Board is adapting these goals to its statement of policy objectives:

1. Encourage residential and small business development within town boundaries;
2. Promote the agriculture and fishing industries;
3. Where development requires the expansion of community services, discourage (a) private marinas, (b) water access for sailboats only, and (c) subdivision development wherein the town provides all the facilities, and require the developer to assume the financial responsibility.

In many ways, the development of a community-wide wastewater treatment system represented the culmination of citizens' concerns over the future of their town. However, continued and widespread interest in land use planning indicates that maintaining a balance between environmental and cultural protection and economic development will require fine-tuning.

The success of Bath offers hope for similar towns in North Carolina and throughout the nation. Bath's success provides inspiration to planners that a thoughtful planning process can produce effective results. □

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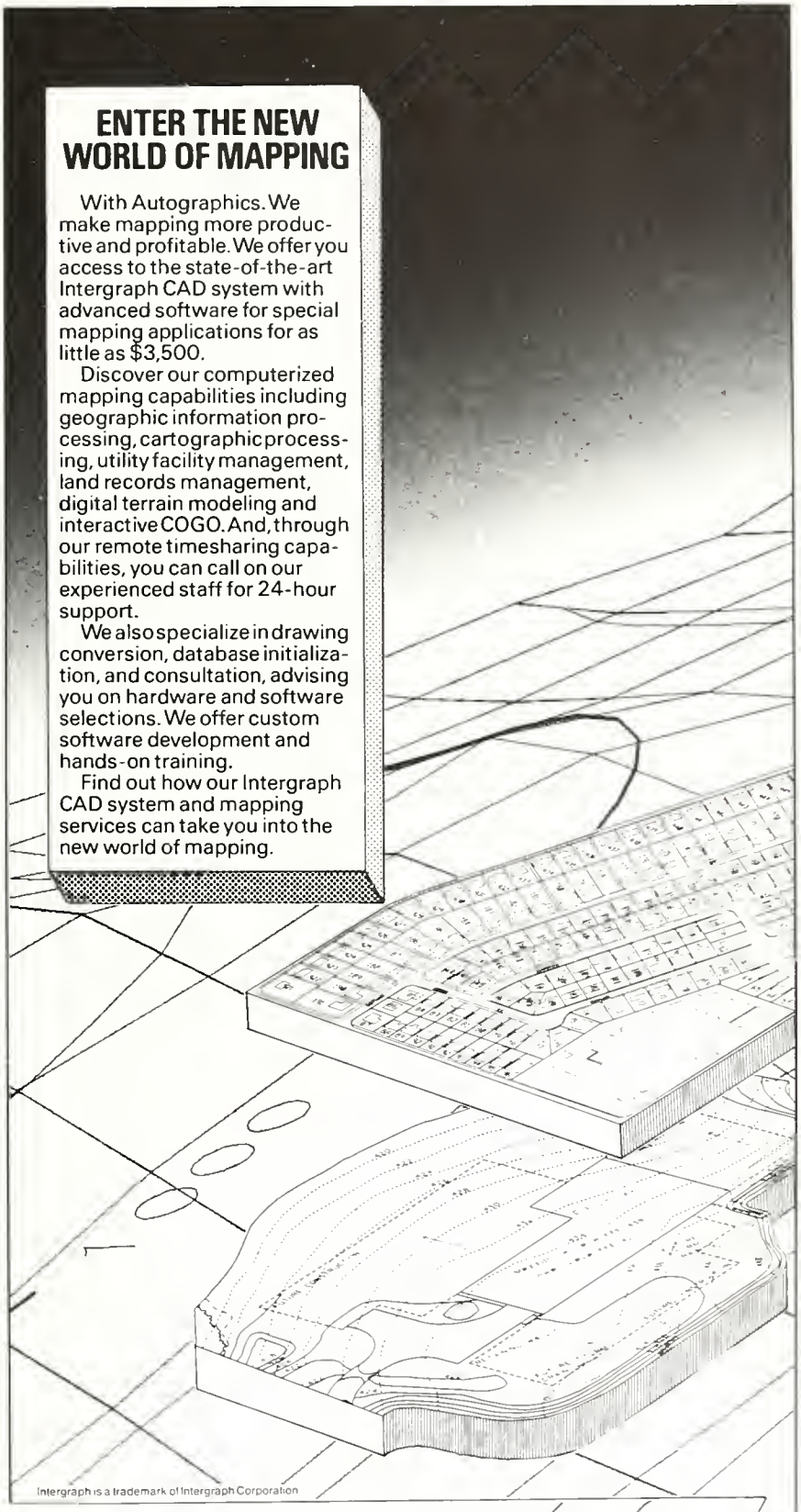

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Is Your Water Supply Protected?

Edward J. Kaiser

Edward Kaiser is a professor at the Department of City and Regional Planning at the University of North Carolina at Chapel Hill. He is Co-editor of the *Journal of the American Planning Association*, and has served on boards as an officer in local, state and national planning organizations. He has been published extensively in the planning field, and is author of the widely used text *Urban Land Use Planning*.

The answer to the question is no, unless you are addressing the latent threats of our chemical age and unless you are employing an aggressive, watershed-wide land use management program. The drought that North Carolina and the Southeast experienced last summer demonstrated our vulnerability to the water *quantity* problem. But it shouldn't distract planners from the more pernicious threats to water *quality* posed by urbanizing water supply watersheds in the chemical age. The geometrical increase in chemicals and chemical use since WWII has increased and complicated the threat to our drinking waters. To answer that threat we must mount new and aggressive water supply protection strategies.

In what we now know is an obsolete era covering most of this century, even into the 1980s, planners and water supply managers considered our urban surface water supply watersheds as multiple use areas. Agriculture, forestry, and industrial, commercial, and residential activities were allowed to coexist with the hydrological process of providing drinking water to an impoundment. We assumed that water treatment would make the water safe to drink.

Within the last few years, however, we planners, water professionals and some local officials have begun to move, too slowly I think, into a new era in which we recognize the threat of the chemical age and realize after-the-fact water treatment must be supplemented with the preventative measures of watershed management. This new era retains the concept of the multiple use watershed, but adds the new concept of watershed-wide land use management to make those multiple uses more compatible with the watershed as a source of drinking water.

North Carolina, for example, has instituted a new water supply classification system that considers the watershed as a whole, bases the classification on potential toxic pollutants to the drinking water, and requires local governments to institute a nonpoint pollution control program to qualify for preferred status. In addition to raising state and local consciousness of the importance of water supply protection, such status requires the state to limit point source discharges in the watershed and will perhaps increase the water system's chances for state funds in the future. If recognition of the new approach is slow, progress in actual implementation is slower yet. Nor have we figured out how to achieve intergovernmental coordination, deal equitably with restriction of up-stream property owner rights, or raise the revenues to pay for acquisition of property and property rights and for on- and off-site structural pollution control measures.

The purpose of this commentary is to suggest some principles of watershed management and to urge a partnership of land use planners with water system managers to (1) improve our understanding of the issue, (2) secure the support of elected officials and the public, (3) formulate improved local strategies, and (4) lobby for more state help. This message is based on regional and national studies of water supply watershed management conducted at the Center for Urban and Regional Studies at the University of North Carolina at Chapel Hill.

The First Principle: Construct a Three-Deep Defense

My *first principle* is that watershed land use management must establish three lines of defense for water quality in order to be effective. The three lines of defense are:

(1) Prohibit the most threatening uses from the water supply watershed altogether.
(2) Limit remaining uses to suitable locations within the watershed.
(3) Control site design, site engineering, and construction practices everywhere within the watershed.

All three lines of defense are required; planners cannot rely on any one line of defense alone.

The first line of defense in land use management should be keeping out of the watershed activities that are associated with large quantities or especially dangerous forms of pollutants. Those include industrial or commercial activities that use known toxics, carcinogens or mutagenic substances; land fills; wastewater treatment plans (including package treatment plants); and food processing industries. Further, if politically and economically feasible, the strategy should prohibit all industrial uses, hospitals, shopping centers, truck stops, gas stations, warehousing and storage facilities, heavily traveled highways, high density housing and such agricultural uses as dairy farms, hog farms, chicken farms, veterinary facilities, and other intensive animal care facilities. Of course, prohibition of such uses depends on counter-balancing economic and political needs and the availability of suitable alternative sites outside the water supply watershed. When those uses are already established in a water supply watershed, steps should be taken to prevent their expansion and, over time, to remove them or otherwise protect the water supply from contamination. This first line of defense requires a special district within the county or city zoning ordinance or a special watershed management ordinance that applies to the entire watershed.

The second line of defense consists of location controls that restrict those uses allowed within the watershed to suitable locations or zones. This second defense should include one zone where essentially all potentially polluting urban, agricultural and silvacultural uses are excluded. Such zones might be called buffer zones, conservation zones, or environmentally critical areas. They may include buffers around the impoundment and along feeder streams, steep slopes, and easily eroded soils. Regulations would allow few uses other than undisturbed natural vegetation in those critical areas. In other, less critical, zones, regulations might allow cropland, pasture, forestry, and low density residential uses only (except on soils unsuitable for septic tanks). Additional, even less vulnerable zones (such as areas further from the impoundment and feeder streams, areas with more suitable soils and areas where roads, sewer, or urbanization already exists) might be created to allow urban development. The point is that in addition to keeping out the most threatening uses from the watershed altogether, the land use strategy must also guide even potentially compatible uses to appropriate locations to minimize their threat to water quality. The second line of defense can be part of the same watershed ordinance or zoning ordinance used to implement the first line of defense.

The third line of defense includes controls on the design of individual sites, site engineering, and construction practices for new development and on the operating practices of allowable uses. It has been tempting to make this third line of defense the main or even sole strategy, but that is a mistake because there is a kind of Murphy's Law or Chernoble Principle at work—whatever can go wrong will go wrong with on-site controls. Sedimentation control devices, materials handling procedures, emergency spill containment procedures, septic tanks, sewer lines and treatment plants, street cleaning practices, and other site practices —they all fail to some degree, at some time. Their design may be faulty. If designed correctly, they may not be constructed as designed. And if designed and constructed correctly, the devices may not be operated and maintained correctly. In other words, on-site controls are inherently unreliable in the intermediate to long run as a sole line of defense of water quality. Furthermore, as a corollary principle to Murphy's

Law, the site design and engineering controls should always include procedures and funds to ensure ongoing inspection, maintenance, repair, and replacement (perhaps through public control of those devices). Overlay zones, special use permits, subdivision regulations, and septic tank regulations can be used to require the necessary practices.

The third line of defense should include off-site structural measures in addition to the on-site controls where required to protect (a) the drinking water source from already existing urbanization and agricultural practices or (b) for new development where off-site structures are more efficient than on-site control of stormwater runoff. Off-site structural measures include in-stream detention structures and aeration or chemical treatment of feeder streams or impoundments before the water reaches the raw water intake. Such structural measures might be provided through exactions imposed on new development or paid for through water user fees.

Two more principles

My suggested *second principle* has to do with targeting the land use controls specifically at protection of water quality and coordinating them into a coherent and identifiable package. Water system managers surveyed in our studies told us that whatever types of land use management controls were employed, they worked twice as well if they were designed and adopted for the specific purpose of protecting water quality. That sounds simple and obvious, I know, but we found that many water supply managers and local government officials had been counting on zoning per se, subdivision regulations per se, septic tank permitting per se, and the like, which were just part of the county's or city's overall land use management program, but not specifically designed for water supply protection. In that case, the controls were only half as effective as when they were specifically designed to protect water quality. So, we should not be satisfied, as some of those managers and land use planners were originally, that we protect water quality just by having zoning and subdivision regulation; those tools and others must be designed and enforced specifically to protect drinking water quality.

In addition, land use controls were judged by water supply managers to work 50 percent better if they were a part of an identifiable, coordinated watershed management plan and *program*, a unified package, not just a disjointed series of separate devices, and if the program was employed across the entire watershed.

The *third* principle is to act sooner rather than later. The longer we wait to manage our watersheds, the more numerous will be the already existing incompatible uses and the greater will be the build-up of expectations of profit among landowners. That makes it more difficult both to design an effective strategy and to get it adopted. Not only is it easier to control new development than existing development, but our study showed that as urbanization gains momentum in the watershed, the potential for profit from land value appreciation and continued growth becomes so great that effective programs become increasingly difficult to enact. As that happens, we will be forced to rely increasingly on the more risky methods of water treatment, site design, site engineering, and operating practices that have that dangerous proclivity to fail. By the way, the principle of acting earlier rather than later implies the identification and protection of future water supply watersheds as well as those already being used.

To protect our drinking water, we will have to move soon and aggressively to watershed-wide, intergovernmental, land use oriented strategies to supplement water treatment which can no longer be relied upon as our only means of protecting public health. This effort will take the combined effort of land use planners and water supply professionals, working with state and local governments, to educate, pass new enabling legislation, and implement new local controls. Only then will we be able to say with more confidence that, yes, our water supply is protected. □

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